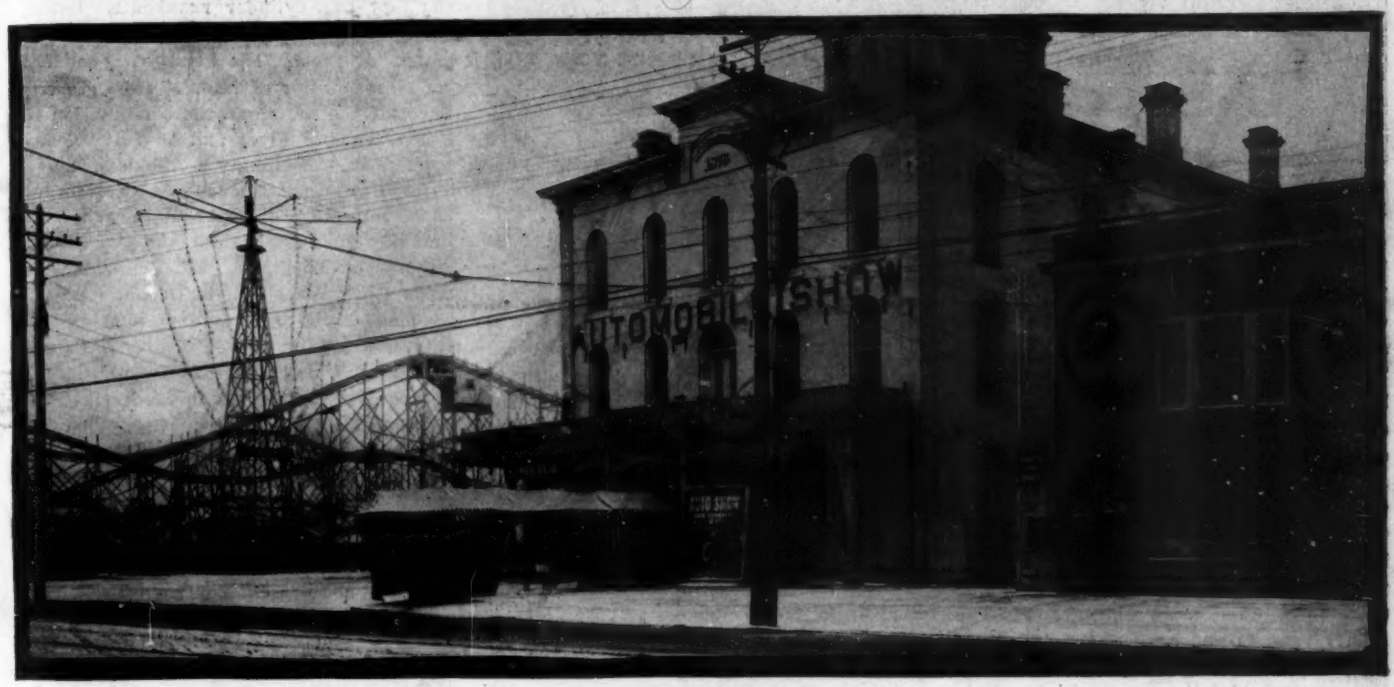
VOL. XII No. 24. CHICAGO, DECEMBER 12, 1907 $2.00 PER YEAR

MOTOR AGE

KING MOTOR HOLDS COURT IN DETROIT



EXTERIOR OF BUILDING IN WHICH THE DETROIT SHOW IS BEING HELD

DETROIT, MICH., Dec. 11—In his own home city, attended by the loyal subjects who have known him since early childhood and have rejoiced with him in his spreading power, King Motor holds court this week. The asemblage is not as large or the arrangements as imposing as those of the celebrations at New York and Chicago and the proceedings are not marked by the formality of the national affairs. Outsiders are few. It is just a nice, quiet, confidential exchange of courtesies, the monarch showing his intimate friends his wealth and might, while the Detroit populace turns to and reciprocates with expressions of fidelity and confidence.

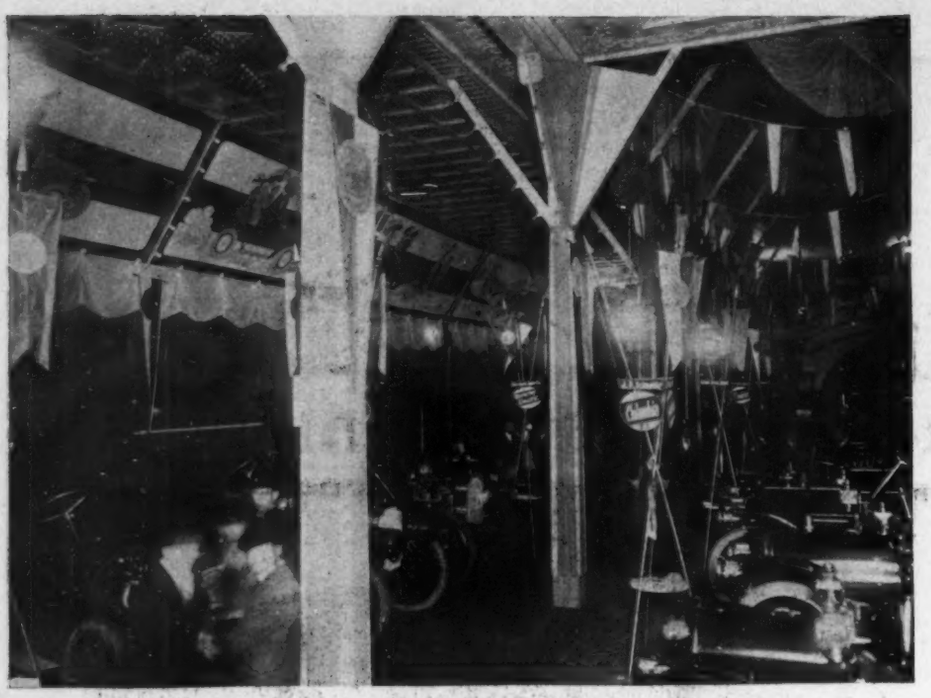
The first annual show of the Detroit Automobile Dealers' Association is not the largest show in number of exhibits or the most unwieldy in point of attendance on the local records. It is, however, by all odds the prettiest, most attractive and most enjoyable. Also it embraces to no small extent the elements of genuine novelty, promoted as it is by the exhibitors themselves, acting as their own impressarios and held in the unique location right in the heart of Detroit's Coney Island, just a block from the Belle Isle bridge approach.

The first impression of the show visitor on disembarking at Riverview park, where the show is held, is one of delighted wonder. For blocks on either side of the show property, Jefferson avenue is fringed with summer amusement places, most of them boarded up for the winter. Skating rinks, penny theaters, lunch rooms, roller coasters, swimming pavilions and what not from the setting. Motor cars are parked all the week in a vacant spot, used in summer time as a festive German beer garden. The pavilion itself where the show is in progress serves duty as a dance hall in season and is the real center of the jollification that takes place every warm evening. Just who discovered its merits as a show place for motor cars is something that never has been divulged. But it fits the purpose finely and is ample in dimensions.

The exterior but illy prepares the spectator for his first glimpse of the show itself. One blaze of green and gold meets the eye. Banners, streamers, pillars, rafters—everywhere the show colors are artistically draped. At the extreme end of the hall is the stage for the orchetsra but far different have been the melodies of show week from those which have thrilled the crowds of the summer time.

Most prominent in the decorations is a frieze of immense poster-cartoons, the work of Detroit's leading newspaper artists, singly and in series, completely encircling the hall. And beneath, covering the floor space except for the two long aisles that trisect the hall longitudinally and form the sole method of travel, motor cars, packed so closely together that even the adept, white-shirted attendants, experienced in just such enterprises, would seem to have difficulty in moving about.

The brass railing is a thing of the past in Detroit motor showdom. The 1907 exhibition cut them out rigidly, substituting merely as a line of demarkation a little line of moulding, nailed to the floor. The show committee also insisted on furnishing all the illumination. There is plenty of



DECORATIONS OF THE SHOW ARE OF A UNIQUE CHARACTER

it, though the rule cost the electric signs which have usually flaunted themselves in the eyes of the optically-wearied spectator. The locations are advertised by modest little signs, bearing only the name of the exhibiting firm, suspended from a standard comprised of three spears, in show colors once more.

Perhaps it was the management's iron rule; perhaps it is the desire of the exhibitors to make their own show a success, but at any rate the discipline evident is something entirely unique in a local show. The sundry vendors and barkers are not represented on the floor except as spectators. Motor cars hold full sway on the big floor. The smallest cardboard sign has to be approved by the management before it can be posted. Gasoline and acetylene are rigidly prohibited. Horns are shown as parts of cars fully equipped but their reeds have been carefully removed. Exits are kept clear at all times. Water coolers are eliminated. There always is someone on deck at the bureau of registration and information. Exhibitors get their passes on a system which prevents more than one man being inside at once on one badge. It was a lot harder to get a complimentary ticket after opening day than for a newly-landed immigrant to secure naturalization papers. Smoking? Why, the very idea!

In apple-pie order the show was thrown open to the members of the Automobile Club of Detroit at 2 p. m. Monday afternoon. All day Sunday cars had been making the trip out Jefferson avenue's asphalt from the Michigan Central which had brought in three special express trains loaded with exhibits from the Chicago show. Most of the exhibitors left the cars in wrappers as much as possible, for mud was flying that day, and the parade of the sheeted monsters astonished the churchgoers. The hall, fully decorated, was ready to receive them and the show was up to the opening-day standard of the usual exhibition Monday morning. The automobile club members, headed by President Harry Skillman, carried away the impression of a complete show and a pretty one.

On Monday evening the exhibitors had the privilege of inviting their friends, a certain number of tickets being issued free of charge to each of them. The result was a gathering of a very professional sort. Chauffeurs, factory testers and men identified with all branches of the trade and industry rubbed shoulders with the general public. More than 2,000 people passed through the doors of the hall, in spite of the fact that the night was rainy and none but interested folk would naturally be out. The aisles were more than comfortably filled all the evening. The display of office and factory stenographers vied with the main attractions of the evening.

The inclement weather of Monday continued to an increasing degree on Tuesday. All afternoon a heavy, wet snow fell which turned in the evening to a colder, dryer article. The afternoon crowd was rather light, but the evening brought out for the first time a really representative gathering. In spite of the fact that the real season was much farther in the future than in the case of any former show, the buying element was distinctively in evidence. Demonstrating cars began to get busy and in this respect again the location of the show was justified, for on all sides stretches out the parkways and boulevards for which Detroit is famous. Belle Isle is but across the bridge; the boulevard which cuts a big semi-circle round the city from river bank to river bank is less than a block off. To the east Jefferson avenue, brick paved for 7 miles, clear to Grosse Pointe, offers a stretch free from city speed regulations.

For the first time this year the Ford Motor Co. placed under the same roof a display approaching something of the line which will be exploited during the season of 1908, consisting of sixes and runabouts practically identical with the 1907 models. A taximeter cab with a four-cylinder motor is a bit of a novelty and so is a light touring car for which no price is announced as yet.

The Buick is prominent. Grant Brothers, who have been the Detroit Buick distributors ever since the Flint factory assumed its position of prominence in the motor world, were allotted twenty-five of the new four-cylinder runabouts. Before the show was 2 days old they had sold seventeen of them. The handsomely-finished car was a center of interest from start to finish of the show and the combination of Buick, Thomas Flyer and Detroit Thomas seemed an exceedingly well-balanced one.

In point of prominence and location, the most imposing exhibit of the show is that of John P. Schneider, the pioneer distributor of Michigan. Mr. Schneider has made a pronounced hit in Detroit with the Stevens-Duryea and is also pushing the Pierce, Franklin, Pope-Toledo and Columbia gasoline and electric. In addition to his regular staff, he has the assistance during the show of Teddy Dey, the Pierce factory expert.

Almost across the aisle from Mr. Schneider is the Brush runabout booth. This Detroit concern believes in doing a thing well or not at all. Following this basic principle, the descent contemplated a year ago on the motor trade was postponed a full year and the added 12 months were spent in fully testing and improving the product. As a result, the Brush is now in shape to do itself proud. Three models are exhibited—the regular standard article with solid tires, another with pneumatics and a delivery car with the same engine, geared down to 15 miles an hour, the last mentioned being the especial design of Dwight Huss, of Oldsmobile transcontinental fame, who has allied himself with the Brush people and has received an allotment of 100 cars and northern Ohio as territory. The factory has been fully organized for the 1908 campaign, with F. Briscoe as general manager and Fred Harris in charge of the sales department. The concern has made full arrangements for fac-

LIST OF EXHIBITORS AT THE SHOW

Fee-Vincent Electric Car Co.—Woods electric
White Sales Co.—White steamer
Brush Runabout Co.—Brush
Oldsmobile Co.—Oldsmobile
Winton Motor Carriage Co.—Winton
Maxwell-Briscoe-McLeod Co.—Maxwell, Mitchell, Columbus electric
Cadillac Motor Car Co.—Cadillac.
Seidler-Miner Automobile Co.—Jackson, Babcock electric
William F. V. Neuman & Co.—Welch, Stoddard-Dayton, Reo, Rauch & Lang electric

tory space in the O-Ri-Bo building in the downtown district and expects to market 2,500 cars this year.

Next the Brush is the booth of the White Sales Co., featuring the White steam car. This agency is in new hands this year, Ralph H. Clark, a newcomer to the trade but with a very advantageous acquaintance in Detroit club life, being the responsible person. Mr. Clark has not yet secured garage room in Detroit but announced early in the week that he would have something of a formal nature later on. On Tuesday he announced that the large model K touring car on exhibition had been sold as well as the runabout in the booth had also been sold.

In spite of the fact that William E. Metzger is the president of the Tri-State Automobile and Sportsmen's Show Association, which will conduct another exhibition later in the winter, the Cadillac local branch utilizes the Dada show to the limit, showing a large space on the center aisle, filled with the latest productions of the Cadillac factory—virtually the entire display at the metropolitan shows, thus demonstrating beyond question the excellent feeling that prevails through Detroit trade circles to the early show.

Another of the big center spaces is taken up by the line of William F. V. Neumann & Co., local distributors for the Welch, Stoddard-Dayton, Reo and Rauch & Lang electric. This booth features a Stoddard-Dayton, cylinders cross-sectioned and blazing with tiny electric lights, which forms one of the principal centers of interest to the lay spectator as it goes through the regular operations, actuated by an electric motor. The firm's exhibit also is helped by the presence of the Reo panorama which has done duty round the show circuit and is displayed to excellent advantage at the end of the hall opposite the stage.

An announcement of more than common local interest was made by the Oldsmobile company early in the progress of the show in the establishment of a new local branch at 42 Randolph street, right in the heart of the motor retailing district in the property now occupied by the Automobile Express Co., a parcel delivery concern which the firm has maintained for several years and has formally declared a failure. S. S. Olds, Jr., will be in charge and the opening of the store will be announced shortly. The company shows a complete line of its 1908 cars under the charge of the management of the local branch.

EXHIBITS ARE CROWDED BUT DEALERS ARE SATISFIED

The Winton Motor Carriage Co. is spread over two spaces with a complete exhibit of the various styles of the Winton Six-Teen-six, which, thanks to Manager Henderson, has been as thoroughly exploited locally as any of the Detroit-made motor cars.

Space M, next the entrance against the east wall of the hall, is occupied by a newcomer to the Detroit trade, the Anderson Electric Agency, distributor of the Detroit electric, manufactured by the Anderson Carriage Co. and the American Simplex. W. G. Isbell, formerly of Chicago, is president of the new concern which is now constructing an elaborate garage and salesroom out Woodward avenue in the heart of the residence district. Mr. Isbell was early voted a distinct addition to the ranks of the local conversation artists. The electric car which he handles is guaranteed to travel 100 miles at a lively clip on one charge, while the gasoline companion—an exceedingly attractive car of the two-cycle type—attracts as much attention from the real experts round the show as any car on exhibition. Mr. Isbell is personally interested in the Simplex factory and has a talking point for the car in the rapid trip he made in it from the factory at Wishawaka to Detroit.

Throughout the entire show the spirit of optimism rules to an extent that is fairly infectious. In spite of rumors of an off year the dealers are unanimously of the opinion that no such signs had manifested themselves during show week. The early date at which the show is being held precluded any great rush of buyers. This is exactly what had been expected. The show has, however, beyond question stimulated the interest in motor cars. It also encourages the dealers by the interest developed on the part of the people in general.

"So long as they are still excited, we can be sure of doing business," was the way one of the leading distributors expressed it and on this score there could be no question of the show's success.

That the early show has enabled the dealers to put in a much more profitable winter is also plainly manifest, as many "prospects" have been located who will be ripe for the period of education that is to occupy the next 3 months and a sample car is all that is necessary for this process.

Best of all, the result has been attained almost entirely without expense to the distributors, for the show demonstrated in the first 2 days that it would pay for itself—a radically different arrangement from the one which has prevailed in past years when an exhibitor was forced to cough often to the extent of $1,000 or more for the privilege of exhibiting his cars at a show from which his income was entirely indirect.

A coterie of little pickaninnies garbed in show colors acting as floor pages, splashed an additional bit of color on the scene.

The Cleveland show management entered the field the first night with negotiations for the newspaper artists' cartoons, to be used as decorations at the Cleveland show.

One enterprising distributor located in the center of the hall used a step-ladder to discern any real heart-to-heart conversations elsewhere, thereby laying himself open to the charge of spotting live ones.

Frank Kulick, just back from the shadow of death and the hospital, moved about the show on crutches and was glad to be alive. He is ready to take the chance again any time his employer builds another racer.

OF DETROIT MOTOR CAR DEALERS

Winton Motor Carriage Co.—Winton
Grant Brothers Automobile Co.—Thomas Flyer, Thomas Detroit, Buick
J. P. Schneider—Stevens-Duryea, Franklin, Pierce, Pope-Toledo, Columbia
Anderson Electric Agency—Detroit electric, American Simplex
De Luxe Motor Car Co.—De Luxe
Fee-Bock Auto Co.—Elmore, Pope-Waverley
J. H. Brady Auto Co.—Peerless, Pope-Hartford
Ford Motor Co.—Ford

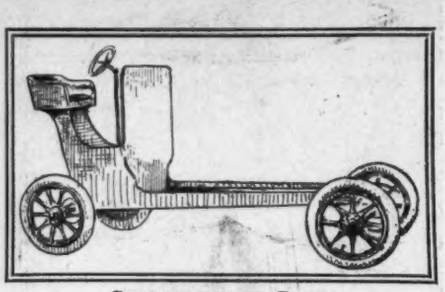
ACCESSORIES FEATURE IN PARIS SALON

PARIS, Nov. 30—Friday, always the most important day at the Paris show, became of extra importance this year because of the charity fete given in aid of the victims of the floods in the south of France. The admission fee, which is $1 on Fridays, was raised to $2, and special efforts were made to draw the monde d'elegance, in which the organizers were quite successful. Foreign notables vied with Parisian mondains in their efforts to get around the packed stands and crowned heads were to be seen, including the queen of Portugal and some of the grand dukes of Russia and archdukes of Austria. All these personages and thousands of others were charmed by the best performances of the noted singers from the Paris opera and elsewhere, while the best military music that France can produce—the Garde Republicain—was there. Flowers were distributed to the women, and, in fact, nothing was missing to make the show an attractive center for all the rich and idle or charitably disposed. Needless to say, the manufacturers made the most of their golden opportunities but this day.

An unofficial trial has taken place just outside the grand palace. Makers have had demonstrating cars on hand. These cars have all had odometers fitted, and it is curious to note the various distances made by the cars during the present salon. This alone creates almost an endurance record in itself, for there are cars with thousands of miles in their credit, showing an average of 200 or 300 miles daily, which is more than even the taximeter motor cab is called on to do.

The salon is as full of accessories as ever, and this is saying a great deal. They are found everywhere, and concerns which have adopted this or that specialty for their car are found showing the specialty itself in a corner of their stands. The trade is being given over to specialists more and more every year. The old-fashioned concern which made its cars from end to end is dying out or changing its methods. Magnetos are seen in all sizes. Low tension is fast giving way to high-tension magnetos, and it seems that these little dynamos will grow in size as their usefulness becomes more evident. The old-fashioned Rhumkoff coil is scarcely to be found at all. Although not on show, the Simms-Bosch people are working on a magneto for an eight-cylinder car, anticipating the coming of this machine in next season's show. In fact there is one in the present salon.

Pneumatic systems of suspension are being much pushed, and generally consist of devices arranged around the extremities of the car springs. They are having a tough fight to hold their own with shock absorbers, of which there are several types on the market. Some of these latter consist of air cushions inside cylinders with articulated ends; others are metallic entirely and others mistake their name in including a secondary spring.



CHASSIS OF THE ROYAN

If coil ignition has given way to high and low-tension magnetos, this is not a calamity in view of the claims of the magneto makers. The Magicienne magneto, which is shown for the first time this year in the Paris show, claims to not only give life to the motor for which it was designed, but also looks after the lighting of the car, exterior and interior. It can also be arranged for electric heating of the car, and of the steering wheel, the latter detail being an advantage in cold weather. A press button on the wheel arranges for the blowing of horns or other warning devices. The electric order transmitter is another accessory used with the magneto, and it can also be used to automatically lock the motor, so it cannot be started without the will of the owner. A portable electric air pump is also worked by the magneto. Finally the heating of the carbureter and the self-starting of the motor are also included in the claims of this magneto, which is in three parts only—the field frame, the armature and the commutator. It is a powerful attraction.

The Nilmelior magneto people are producing a magneto which has a double igniting principle and starts the motor on a simple press-button principle. The Simms-Bosch magneto is a step towards popularizing the low-tension system. The great novelty is the electro-magnetic rupture. The Mercedes and Motobloc motors in the grand palace have this system fitted.

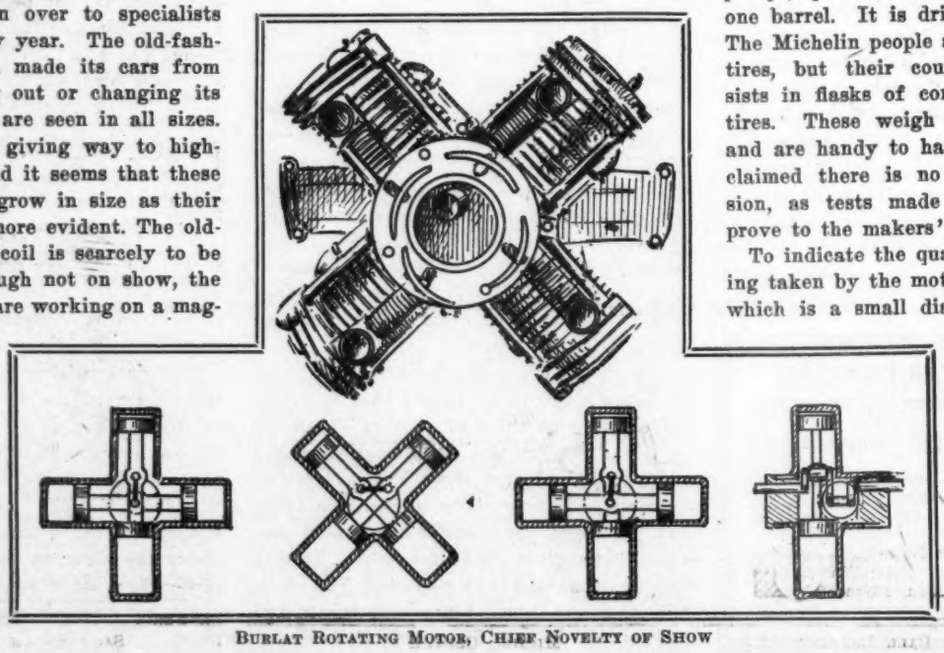
Another novel accessory is the Auto-Routier, worked by a flexible transmission geared to the front wheel of a car. It contains a plan of the road being followed and rolls up out of sight as the car proceeds on its journey. It shows all obstacles, danger points, altitudes, descents and, in fact, everything of interest on the road. Another little apparatus, simple yet useful, is a sort of projected arc in which rolls a ball. As the ball rolls to the left or right of a fixed mark so is the grade of the incline marked. The apparatus is as simple as it is neat and is fixed to the top of the dash.

The triparabolique headlight has three points of light, each of one candlepower, arranged one in front of the other. Thus the greatest possible efficiency is obtained from the parabola which forms the interior mirror. A newspaper can be read at 150 meters' distance after dark with this headlight.

There is quite an influx of air pumps at the salon, electrical, mechanical, geared, belt-driven, etc. The old-fashioned way of pumping tires by means of a hand pump seems very clumsy indeed after examining some of the little devices to be seen on show. The Vadam pump claims to have overcome the trouble of overheating, which is a common complaint with these small pumps. It consists of a number of small pumps, quick in action and combined in one barrel. It is driven off the flywheel. The Michelin people also have a pump for tires, but their counter attraction consists in flasks of compressed air for the tires. These weigh only a few pounds, and are handy to have in the car. It is claimed there is no danger from explosion, as tests made on the steel flasks prove to the makers' satisfaction.

To indicate the quantity of gasoline being taken by the motor is the Sonsometre, which is a small dial indicating and recording at the same time. Thus the total quantity of gasoline used is indicated at any given moment and, as a corollary, the quantity left in the tanks.

The Silenceuse a vide is a muffler which is claimed to be more efficient

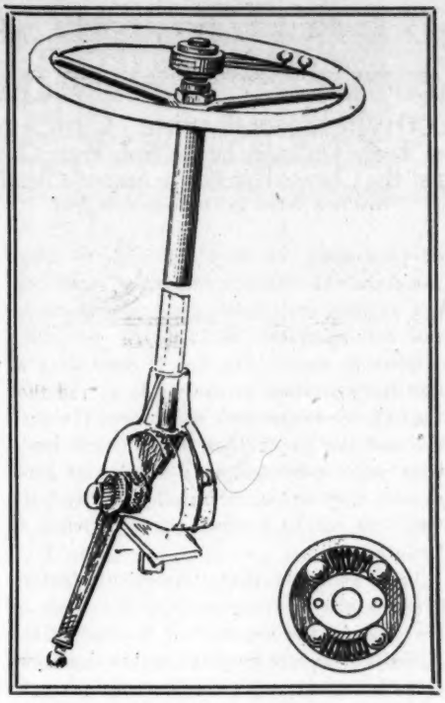


BURLAT ROTATING MOTOR, CHIEF NOVELTY OF SHOW

than a free exhaust. It consists of very few parts, the exhaust being led into the cylinder and escaping at once around the orifice of a funnel in the way to induce a free air current down the funnel, which is open to the air. The air in rushing down the funnel increases its pressure and mixes with the exhaust at quite a high pressure, thus obviating any back pressure. It is a cheap and efficient construction.

Among the anti-skidding devices calling for attention is one of the Hutchinson Tire Co., consisting of the usual steel rivets with the inner ends spread in the fabric. On the tread, however, and right across it are pieces of hard fiber through which the rivets protrude. This substance has given excellent results in practice and is practically unwearable. Of electrical appliances to give warning notes, many-toned horns, whistles, etc., there is no end, and sirens driven from the exhaust or from the flywheel are also pretty common. To give a detailed list of the many accessories at the show would take pages of matter, and the number may be gauged by the statement that a day may easily be spent in and around the car accessories.

Is the eight-cylinder motor for touring cars to come from Austria? Laurin & Klement are exhibiting an eight-cylinder motor built in Buda Pest. Its cylinders are cast in two lots of four and have 88-millimeter bore by 110-millimeter stroke. There is a double ignition by means of the same spark plug, one made by a Rhumkoff coil and the other by high-tension Simms-Bosch magneto. A special magneto for eight-cylinder cars is being brought out by this concern, but at present two magnetos are used, one for each group of four cylinders. The motor presents a neat appearance and is not unduly long. Its weight is not much over 600 pounds. The claims of the makers are, of course, that excellent efficiency is obtained in the cycle and a very medium-



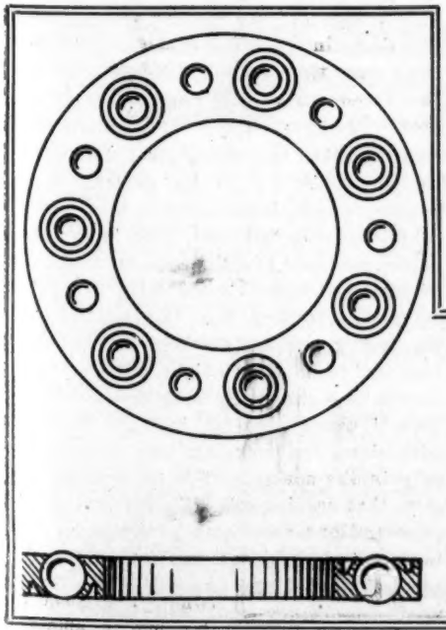
MECHANISM OF AUTOLOC STEERING GEAR

sized flywheel is fitted. It is the only eight-cylinder car in the French salon, and is stowed away in a corner of a gallery in the big building.

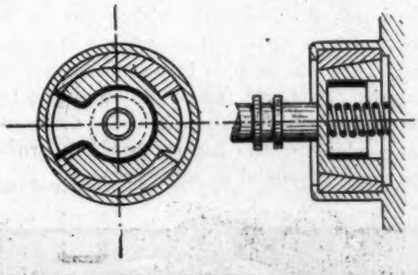
Among the innovations of the larger concerns must be mentioned once more the four and six-cylinder groups of Renault. These are exhibited in the annex, but have attracted so much attention that it is certain that further work will be done by the firm on this type of motor. Renault proposes this V setting of cylinders for racing cars and, although the two or three models of water and air-cooled motors on view were admittedly built as an experiment, yet orders have been received for more groups of like nature, and it may be that a generalization of the type may be seen in certain directions, especially in motor boats.

As the third week of the Paris show wears on to the closing day the lessons of the great French show become more accentuated and people begin to appreciate things at their full worth. The fact that the salon is open nearly 3 weeks and that the daily attendance is as great as ever proves that public interest in the mechanical beauties of French construction does not flag, despite the length of the show. It must not be forgotten that the salon is the only motor exhibition in France and that unusual facilities are granted by the railways in order to enable the provincial visitor to attend. It also is the only show on the continent which may really be called representative and it certainly has the preference where makers had to choose between exhibiting at Olympia and Paris. Again, it is the only continental show which is held early this year and for that reason, too, foreigners from all over the continent flock forward and make a prolonged stay in Paris. In view of the fact that Olympia was on at the same time as the Paris show, fewer Britishers were seen this year; at least during the first 2 weeks. Business is reported to have been brisk, especially so among the concerns making a specialty of small cars, mono-cylindrical or two-cylinder turnouts. In fact, several of these are reported to have disposed of their whole production for 1908. This is not an exaggerated statement, for it must be remembered that the output of these makers is not very great, a plant with an output of 750 or 1,000 cars being considered of importance in France. It seems that if anyone is complaining it is those who expected to sell quantities of sixes. There are not many of these, but the fact that the six-cylinder motor or car has not made much progress in French popularity is apparent to all; in fact it cannot be denied, in view of the French tendency to economize fuel, which feeling is increasing in France in leaps and bounds.

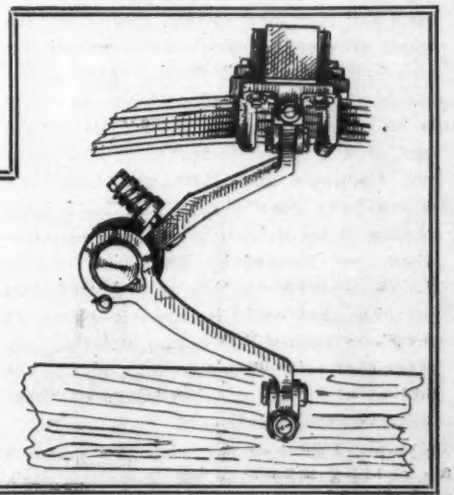
The end of the Paris salon leaves the makers very hopeful, especially as regards the commercial side of the question, that is, the matter of industrial applications. The pleasure car is another question, and makers do not yet know how the sales will pan out. There have been numbers of contracts signed conditionally upon a certain time limit being allowed the buyer before the order is considered placed and it is thought that people want to see the year out before binding themselves. The French purchaser, apart from the Parisian, is a wary bird and may become even more so because of trade rumors.



ROCHE & SANTON BALL BEARING



MICHEL CLUTCH



SANS SHOCK ABSORBER

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MOTOR AGE

Subscription Two Dollars a Year, Foreign and Canadian Subscription Four Dollars
Charles P. Root, Editor

1200 Michigan Avenue, Chicago
Published Every Thursday by the Trade Press Company
Entered at the Chicago Postoffice as Second-Class Matter
New York Office 29 West Forty Second Street

PREJUDICE WITH A PURPOSE

ACCORDING to one poor lonesome Britisher writing in an English motoring journal the American-made motor car is about the one last thing in which the public should become interested—it should buy English machines and French machines or any other machines made outside of America. Yet, strange to say, the English people and the French people and some other people abroad keep on buying American-made machines, as the record of exports will show. Some of the statements made in the correspondence are to the effect that the big concerns in this country employ foreign designers and frankly copy European methods—that the Europeans do the pioneering and the Americans simply copy. It will be admitted there are some designers of foreign birth and education, but they can be counted upon the fingers of a man's two hands. Riker, Apperson, Haynes, Huff, Mooers, Bate, Duryea, Coffin, Winton, Stearns, Knox, Ford, Brush, Becker, Wilkinson, Frayer, Miller, Gaeth, Jeffery, Maxwell, Olds, Welch, Tincher—and there are others—are these foreigners?

They do copy—and improve; everybody copies and improves. The foreigners copy—copy anything that looks good—and that is what makes progress. The Americans also originate—they have shown more originality in the past couple of years than have the foreigners and while America has copied from the foreigners in the past the foreigners are copying from the Americans now and will be doing so in the future. According to the writer the American makers of low-priced cars cannot copy because of the tariff, which prohibits the importation of good foreign low-priced cars; and then he says that while there are scores of excellent single and two-cylinder cars in England and France there is not one in the United States which can claim to be a satisfactory article. But in the face of this the little Maxwells and Fords and Cadillacs and Reos and Olds and others have gone abroad and have been purchased by Britishers and run by Britishers and boosted by Britishers because the Britishers knew they were better than anything that could be found at home at anywhere near a like price—and the very paper that printed this correspondence has told of the tales of the doings of these same American-made cars.

Motor Age does not wish to be understood as saying that all American cars, either large or small, have reached a state of perfection; it does not wish to make the claim that British makers of small cars are turning out mechanical abortions, as the correspondent said of the American makers of small cars, but it does wish to call the attention of the world to the fact that the correspondent who wrote the article and the paper that published it knew that what was said was absolutely false or else they are such unreliable "authorities" as not to deserve the confidence of their readers.

It is admitted that "American factory systems are in every respect the equal of the best in the world"; it is claimed the American makers employ foreign designers and that they copy foreign designs. In the same breath it is charged that the American makers are turning out mechanical abortions and that they are from 2 to 3 years behind Europe in the matter of construction. Do these statements coincide? Is it not a fact that one statement absolutely refutes the other?

EARLY OR LATE SHOWS

NEW YORK and Chicago have tried the early big shows; Philadelphia, Baltimore and Detroit the early small shows; St. Louis and other cities are on the list of experimenters. The attendance at the shows has been large or will be large—but the whole question is whether, with the satisfactory attendance, the shows have been as beneficial to the trade as the makers have hoped—whether these shows have proved successful, in fact, from a selling point of view. It will require some careful compiling of statis tics gathered from order books to determine this and it will require careful comparisons, because of the peculiar financial conditions existing, to be able to say to the trade that the early shows have been mistakes or successes. The N. A. A. M. will be in a position to judge of the success of the early show from the standpoint of admissions, but it will be compelled to feel the pulse of the trade by vote in order to determine if these affairs have proved all that the maker was led to believe them to be. It may prove that the early show has been of benefit to the maker, but the agent and the public must also be taken into consideration in order to round out a plan for the future that will prove the most beneficial to all interests.

OPTIMISM WAS RAMPANT

REAL OPTIMISM and real business or forced optimism and terrific lying sum up the trade situation as judged by results of the Chicago show, which ended in the usual blaze of glory last Saturday night. If the optimism that appeared to prevail was forced, then there was clever acting on the part of the exhibitors, for there was hardly one serious complaint of poor business, while there were any number of tradesmen exultant with the joy of what a good week's selling could bring. It is true some took into consideration the facts that the show was held extremely early in the season and financial troubles existed, and possibly based their calculations on these conditions; on the other hand, there were very many who made the claim—and with great earnestness—that their business at this show had exceeded that at any previous Chicago show, when there were no financial troubles and when the show was close upon dates for delivery of cars.

There was no cry of hard times; nobody seemed to talk of stringency; all seemed to have money; money appeared sufficiently plentiful to warrant deposits being made on the part of dealers and retail buyers. Nobody who attended the Chicago show could have imagined that the people had forgotten that they wanted motor cars; nobody could have imagined there was to be the least slackening in motoring interest; nobody could have had any grounds for becoming pessimistic over the motor car trade situation. All this could not have been feigned—it must have been earnest and genuine optimism based upon something tangible.

It was the consensus of opinion, however, that the fall show is not desirable—for the maker or for the dealer. While satisfactory business came to most of the exhibitors they felt that, even in the face of the remnants of a financial trouble, they would have been blessed with a greater amount of trading were the show held in the spring, when motoring enthusiasm is supposed to be at its height. The immense crowds and the really long list of "prospects" would seem to indicate that the enthusiasm for motoring does not crop up only in the spring, but is an ever-present germ that nothing can kill—one that multiplies and one for which no germicide has been found. Chicago has borne out the prediction of Motor Age—that the great west has money and will invest it in motor cars for both business and pleasure.

THE last of the really big American shows came to a close last Saturday night and save for the importers' exhibition in Madison Square garden the latter part of this month and the usual displays in the larger cities on the show circuit, there remains nothing for the maker to do but to go back to the factory and rush the work to fill the orders taken at Chicago and New York. There is no gainsaying the fact that as a business producer Chicago certainly proved its superiority and once more demonstrated that it is a really national affair—a mighty mart which attracts agents from all sections of the central states and the great west, who take this opportunity to see and compare different cars. The minor shows which now follow—St. Louis, Buffalo, Boston, Hartford and the like—each will contribute its little mite toward the general prosperity of the motor car trade.

* * *

BY NEXT summer this country will really begin to appreciate the magnitude of the recent 600-mile reliability run of the Chicago Motor Club, when the petty squabbles over penalization will have been forgotten, the designers will have learned the lessons taught by the run, other promoters will have copied the rules under which the affair was held and the strenuous effort of the Windy City motorists will have become a classic. It is worthy of note that few complained of the penalties imposed by the judges and even the kickers realize that in each and every case the officials gave fair and impartial hearings. It is no slight task, that of passing judgment on thirty-five of the leading cars which have been over 600 miles of country roads, and that the technical committee should have survived with only three protests speaks volumes for the general fairness of the rules. The motor club has done its part—time will do the rest.

* * *

AT LAST the American Automobile Association is on the right tack. The blinders have fallen from its eyes and now it sees that the entire United States is not confined to the eastern section of this continent. In deciding to give the west the stock car race because the east has the Vanderbilt, the A. A. A. officials representing the Hotchkiss regime have come out of their shells and the west should show its appreciation by aiding the national organization by becoming members. In union there is strength, and if the A. A. A. can enroll under its banner the majority of the motorists of this country there is a grand chance to accomplish much good for motoring in the way of securing better roads, fair legislation and other benefits that cannot be had unless there is a united cry for them.

* * *

EVEN the Englishman will have his little joke. Maybe this particular Briton was serious when he perpetrated his jest, but if he was his fellow John Bulls did not take in that light the proposition to abandon the Olympia show. To the majority this was a joke pure and simple, and despite the fact that this jokesmith argued that the business would be done just the same as if a show was not held, the others could not see it in that light, so the Society of Motor Manufacturers and Traders decided unanimously to continue business at the same old stand, although it decided to cut from 2 to 1 week. In the United States, while people may scowl when show time comes around and grumble over the work and expense attached to following the circuit, it is recognized that the show as an educator cannot be surpassed and while the manufacturer may not receive any tangible return for his financial investment, the profit is there. Why any sane Briton should want to abandon a show that attracted 19,114 people, on an average, for every day for 12 days, is hard to answer on this side of the Atlantic. The show is here for several more years at least and everyone should hail it as a means of getting in direct touch with the people such as is afforded by no other medium.

IT WOULD be queer if staid old Philadelphia beat the rest of the big cities in the way of being first to have an American Brooklands. There have been speedway propositions galore sprung since the Long Island parkway first was floated, but of them all Philadelphia seems to have something tangible. Maybe the Quakers will slip up before putting the deal through, but if they do succeed in building a 2½ mile track at Llanerch, Delaware county, they certainly will be able to profit through their enterprise, for a speedway like the one proposed is something that is badly needed in the United States, for your American wants speed contests and he does not want to see the make-believe sport on the circular mile tracks, now on its last legs.

* * *

FIGURES do not lie, they say, and while in some cases this may not be so, when the federal government gives out the information one cannot help but believe the statements. Therefore, the American manufacturer should be in a jubilant mood over the magnificent showing being made in the export business. Three years ago the combined total of cars and parts sent out by this country reached the million mark. In 1906, for the first 10 months, the cars and parts shipped aggregated $2,356,110. Now comes the statement that for January, February, March, April, May, June, July, August, September and October of this year we sent out 2,622 cars, valued at $4,718,676, and the parts exported reached a total of $563,277.

THE WEEK IN BRIEF

Friendly suit started by Hartford Rubber Works against Electric Vehicle Co. results in appointment of two receivers; action will be followed by reorganization of the company, it is said; statement of assets and liabilities.

Olympia show ends after big run; motion to dispense with show is unanimously killed, although next year's exhibition will be of only 1 week's duration instead of 2.

Philadelphians plan to construct 2½-mile track in Delaware county, Pennsylvania, that will be an American Brooklands; big tract of land secured.

Executive and technical boards of A. A. A. meet in Chicago; former revises track racing rules and latter undertakes promotion of stock car race.

Chicago show comes to an end after a week of success; exhibition proves good business getter and everyone is well satisfied.

Three protests lodged in Chicago show reliability run decided, referee sustaining the rulings of the technical committee.

Export figures show that shipments for first 10 months of this year are double that of corresponding period in 1906.

Chicago Motor Club patches up peace with A. A. A. and selects new set of officers.

COMING MOTOR EVENTS

German Shows—Exhibition of touring cars in Berlin, Germany, December 5-15; exhibition of commercial vehicles, December 19-22.

St. Louis Show—Second annual show of St. Louis Manufacturers' and Dealers' Association, Jai Alai building, week of December 14-21; John J. Behen, chairman.

Brussels Salon—Annual Belgian show, December 21-January 2.

Importers' Show—Importers' Automobile Salon exhibit of pleasure and commercial vehicles in Madison Square garden, New York, December 28-January 4.

Hartford Show—Annual exhibition of Automobile Dealers' Association of Hartford, Conn., in Foot Guard armory, January 14-18.

Irish Show—Annual Irish show in Dublin, January 4-11.

Italian Show—Exhibition in Turin, Italy, January 18-February 2.

Detroit's Armory Show—Seventh annual show of Tri-State Automobile and Sporting Goods Association in Light Guard armory, February 10 to 15, inclusive.

Boston Show—Annual Boston show, from March 7 to 14, in Mechanics hall. Chester I. Campbell, manager.

BUSINESS IS FOUND AT CHICAGO

National Show Lives Up to Its Reputation, and Exhibitors Are Well Pleased with Results—Commercial Exhibition a Success—Gossip of the Week

Chicago, Dec. 8—The seventh annual Sam Miles show has passed into history, the doors of the three buildings—the Coliseum and the two armories—closing last night after a successful run that stirred to enthusiasm over the outlook the 300 and more exhibitors who displayed their wares there for a week. It was a closing in marked contrast to that of either the garden or the palace in New York city, for everyone was in a jubilant mood and the order books were filled almost to overflowing—so it was said. It had been a show that excelled all its predecessors in the way of decorations and crowds and one which compares favorably with any in the matter of business done. In this latter respect, considering the cry of hard times, it was a most remarkable show, which produced business from unexpected quarters and which sent the exhibitors home well pleased with their venture.

As is usual with all these shows there were all sorts of figures out today regarding the number of cars exhibited, the number of people that attended the show, the business done, etc., which the daily press eagerly grabbed. It was stated that the retail sales at the show were $3,000,000, that 2,000 cars were sold at an average value of $1,500 and that the accessories people did a business estimated at $2,500,000. The attendance was placed at an average of 17,000 a day. Four hundred agencies were established, according to these statisticians. Undoubtedly these statements are wide of the mark, but on the other hand one should accept them in general as telling a tale of wonderful prosperity on all sides. No one can venture to predict as to the total sales, but they were undoubtedly large. The attendance probably averaged 13,000 a day.

The show was a business-getter, everyone will admit that. Even the opening night, when the house generally is well papered, there was business in sight, retail as well as wholesale, and as the week went on the prospects became even brighter. The live stock show undoubtedly brought to the city many thousands of people from the rural districts and most of them were interested in motor cars one way or another. They came to the show and the wideawake motor car exhibitors caught them while their enthusiasm ran high. This helped the retail end of the game a lot. Also in this flood of outside humanity came many agents from the country districts, who killed two birds with the same old stone. This gave everyone a chance to close up unoccupied territory and most of them took advantage of it. The city folk, too, were interested and it was among these that the makers of high-priced cars did their business, although this class of sales did not run up into astonishing figures, it is claimed.

Not a whimper about hard times was heard. General Manager Miles had written a strong letter to each exhibitor, advising them to become optimists and forget the panic. All did so and in consequence everyone was a booster. To hear them talk, one never would imagine there was any doubt about the prosperity of the country and that the Miles advice was sound was shown by the big business done.

Undoubtedly the greatest crowd was out Friday night, when the big buildings were packed so that the lock-step was most popular and it was hard work getting from one part of the show to another. Even the dirty alley connecting the Coliseum and First regiment armory was overlooked in the general good feeling aroused by the show and women daintily clad defied the mud in their anxiety to take in every part of the show. Miles was favored a lot by the weather, though, for only on Saturday night, when the thaw came, was the alley in poor shape. Otherwise the weather the latter part of the week was surprisingly good for a Chicago show. It wasn't too cold to enjoy demonstrations, while the skies were clear and the snow frozen. This undoubtedly helped out the attendance.

The commercial show, the first one ever held in this country, proved to be far more of a success than anticipated by its promoters and they were most sanguine. The affair was held in the Seventh regiment armory, two blocks from the Coliseum; but despite its isolation it drew comparatively large crowds. The average attendance ran between 2,500 and 3,000—small, according to the general count, but extraordinarily large when it is considered that few went there who were not interested in the power wagon from a business standpoint. There was some grumbling among the exhibitors in the commercial section because they paid as high a rental for their space as did the inhabitants of the Coliseum, where there were five times the number of paid admissions; but in answer to this, those speaking for the management pointed out that it was a case of quality not quantity and that the 3,000 people who called at old Tattersall's were far from being rubbernecks and that in comparison there was as much business in the 3,000 as there was in 18,000 in the pleasure car end of the show.

This general prosperity was not confined to the show, the echoes of show week bringing out the big slice of the melon secured by those who held private exhibitions. Five or six local concerns kept open house during the week and each of these reports that the results were surprising. Few of them did much of a retail business, but the big exhibition brought in touch with them many country agents, who wandered up and down the row going to and returning from the show. The retail business was comparatively small, for the city people evidently reasoned the stores would be open the year around, while the show only lasted a week. Therefore they postponed their buying to a time when there was no counter attraction.

During the week there were several meetings and dinner functions, chief among them being sessions of the executive and technical committees of the American Automobile Association. The mechanical branch of the A. L. A. M. also assembled for a discussion on body building, listening to addresses by several of the experts in this line. The executive committee of the N. A. A. M. also met, but as usual nothing was given out as to what was done outside of the statement that routine business was transacted. A successful attempt was made to organize the agents, the National Retail Dealers' Association being the result. Officers of this new organization are as follows: President, C. F. Jensen, Joliet, Ill.; vice-president, R. Hokanson, Madison, Wis.; secretary, J. A. Crum, Oshkosh, Wis.; treasurer, L. Ohnaus, Fort Wayne, Ind. The object of this association is "the mutual protection of the members of the association and the purchasers of motor cars." President Jensen says the main idea is to prevent the sale of cars by agencies which are subsequently not in a position to care for their customers—in other words, to weed out the irresponsible concerns. One of the innovations of the week was the party taken to the Mitchell factory at Racine for luncheon and an inspection of the plant in that city.

As regards the time for holding national shows, the sentiment expressed backed up the views expressed by Motor Age through its editorial columns. The majority and in fact nearly everybody, believes the first week in December is much too early, so far as business possibilities are concerned. A show in the spring would be best, they say—at any rate it should not be earlier than February, as was the case last spring when the previous Chicago show was held.

ENGLAND STICKS BY OLYMPIA

London, Nov. 28—The Olympia show is at an end, and while it was as successful as any yet held in this country, the makers are convinced that 2 weeks is too long a stretch for such an affair; therefore, in the future the big show will be spread over 1 week only. Despite this success, though, the fate of Olympia trembled in the balance last week. One manufacturer

brought up before a special meeting of the Society of Motor Manufacturers and Traders the proposition to abandon the show, claiming the expenses were too great and that the business secured there could be had anyway. Others did not share his views, however, and the proposition was defeated, it being the unanimous opinion of those present that Olympia should be continued, although of 1 week's duration instead of 2. Figures show that in point of attendance this year's show did not come up to its predecessor, although the length of the exhibition should be taken into consideration when the comparison is made. The report shows that the 12 days of the exhibition attracted 229,374 people, with the greatest attendance on the first Saturday, when there were 28,606 people in the building. This averages 19,114 per day, as against 23,292 at the preceding Olympia. The biggest day in 1906 was the last one, when the gate shows an attendance of 29,000. Reports from the exhibitors show considerable business done in the 2 weeks, so all feel well repaid for their work.

SIXTEEN PERFECT SCORES

Washington, D. C., Dec. 10—Special telegram—In a driving rainstorm twenty-six cars started this morning in a 118-mile sealed bonnet contest under the auspices of the Automobile Club of Washington. Twenty-two cars finished the run, of which sixteen had clean records. Three cars declined the issue. The weather conditions were abominable. Two days' rain put the roads in the worst possible shape and sixteen clean scores demonstrated good cars and careful driving. The route was out Brightwood road to Olny, thence to Ridgeville and Frederick, Md. The cars turned back at the latter point and proceeded to Ellicott City over the national pike. The last leg of the trip was from Ellicott City to the clubhouse. But one car had serious troubles and there were also few tire troubles in spite of the adverse road conditions. The clean-score cars were as follows: Thomas Flyer, W. C. Hood, driver; Franklin, E. Hart; Buick, S. Luttrell; Oldsmobile, J. A. Lutz; Ford, C. E. Miller; Cadillac, R. Jose; Maryland, J. M. Rife; Franklin, F. S. Blivens; Locomobile, I. Florida; Packard, I. Freund; Wayne, J. Hartman; Columbia, F. P. Hall; Mitchell, P. M. Smart; Mitchell, J. I. Flynn; Maxwell, J. R. Thomas.

DATE SET FOR RACE

New York, Dec. 9—Entry blanks are out for the proposed stock car chassis race next spring. The date set is Friday, April 24, 1908. Entries will close January 15 with T. F. Moore, secretary, 47 West Forty-second street. It is announced that the donor of the cup is Walter W. Law, owner of Briarcliff Manor, wherein it is at present planned to run the race. There has been some criticism of the entry fee being so high as the $1,000 named.

COLUMBIA IN COURTS

Friendly Suit Started Against Electric Vehicle Co.—Two Receivers Are Appointed

New York, Dec. 11—Special telegram—As the result of a friendly suit brought by the Hartford Rubber Works Co., which has a claim of $11,785, the Electric Vehicle Co. has been put in the hands of receivers. It is said the asignment is but temporary and for purposes of reorganization. In the natural course of events the factory at Hartford will be shut down for a few days, pending the taking of an inventory and making arrangements for cash to meet the weekly pay roll.

A high official of the company, who did not wish his name used, said to the Motor Age correspondent today that the company was too heavily capitalized, that efforts were to be made to reduce this and that there was every hope and chance that the company would be able to go ahead and meet its contracts for cars with bright prospects for the future.

At Newark yesterday Judge Cross, of the United States circuit court, appointed Halsey M. Barrett and Harry M. Nuckols, who is secretary of the company, as receivers. In this city Judge Ward, of the United States circuit court, appointed Mr. Barrett and William S. Montgomery as auxiliary receivers.

The direct cause of the receivership was the company's failure to meet the payment of $2,500,000 of 6 per cent gold bonds which fell due on November 1. The tight money market made it impossible for the company either to borrow money or collect what was due. The maturity of the bonds had been extended from 1905 to the date named. In addition to the bonded indebtedness secured by a mortgage on the property the company owes notes aggregating $899,351 and accounts payable amounting to $420,790. The assets are placed at $14,084,432, of which only $12,000 is in cash. Outside the bonds the indebtedness consists of demand promissory notes to the amount of $591,043.02, a note for $300,000, which fell due on December 3 last; a note for $2,600, due December 25 next, and a note for $5,078.18, due January 15 next; accounts payable aggregating $204,790.32, of which $150,000 has been due and unpaid since November 15. It is said that $2,016,000 of the liabilities is past due and the assets are listed as follows: The manufacturing plant at Hartford, consisting of land, machinery and appliances for the manufacture of motor cars and vehicles, which has a book valuation of $717,498.16; office furniture, $4,731.54; finished vehicles, $173,087.73; consigned vehicles and merchandise of a book or cost value of $90,387.51; raw materials, supplies and parts in process of manufacture, $770,474.20; finished parts, $378,714; stocks and bonds of other corporations of a book value of $358,002; patents and patent licenses of a book value of $11,447,537.28; accounts and notes receivable, $132,000; cash, $12,000.

Of the company's $20,000,000 stock $9,000,000 is 8 per cent cumulative preferred. There is outstanding about $10,500,000 common and $8,000,000 preferred. In 1899 the company paid dividends of 8 per cent on both common and preferred. No dividends have been paid since that time. Of its stock the Electric Storage Battery Co., of this city, owns more than $60,000, divided about equally between common and preferred and $540,000 bonds.

The Electric Vehicle Co. was incorporated in New Jersey in 1896. It had its origin in the Electric Carriage and Wagon Co., of Philadelphia, owner of the electric vehicle inventions of Morris and Salom. In 1899 it absorbed the plant and business of Colonel Pope's Columbia motor car venture and the following year the entire manufacturing was turned over to it. In this year the Riker Motor Vehicle Co. was bought and various transportation companies formed to operate cabs.

WESTERN BRANCHES FOR RENAULT

New York, Dec. 9—Arrangements have been made by the Renaults to open branches in Chicago and San Francisco, which will handle the Renault line, which, in addition to the two and four-cylinders, include a 50-60-horsepower chassis six-cylinder motor of a vertical type. The inlet and exhaust valves are mechanically operated by single camshaft. All the valves inlet and exhaust on the same side. The cylinders are cast in pairs, and the crankshaft is separated by four bearings. The ignition is by a high-tension Simms-Bosch magneto to the sparking plugs, the carbureter is automatic and of a constant level type. The cooling is obtained by the means of a water circulation on the themosyphon principal. The 50-60-horsepower chassis is fitted with a patented friction clutch, which is made of an ordinary leather cover, male cone, encased in a cast rim, forming the female cone. The gearbox is four speeds, forward, and one reverse. The other types are the 35-45-horsepower, the 20-30, the 14-20, the 10-14, all four-cylinder motors, and the 8-10-horsepower two-cylinder chassis of the Paris taximeter cab style. The Renault history is interesting. In 1898 Louis Renault, who was only 19 and just out of school, started to build his first machine in a small workshop which he established in a corner of his mother's garden at Billancourt, France, and soon he invented a new form of speed-change gear. One of the novelties of this change-speed gear was that of direct drive on top speed. In fact, the entire model was so successful that Louis Renault had the idea of building a number of similar machines and as his private workshop at Billiancourt was too small, a larger place, fitted with a variety of instruments for cutting the gears and other parts, was erected. This was the start.

IMPORTANT ACTION BY THE A. A. A.

Executive and Technical Committees of National Organization Meet in Chicago, Former Amending Track Rules, and Latter Deciding To Promote Stock Car Race

Chicago, Dec. 8—Matters of vital import to the American Automobile Association came up during show week when the first meetings of the executive and technical committees were held. The latter body decided on holding a stock car chassis race next summer, while the executive committee revised the racing rules as applied to circular tracks. Also it was announced that the racing board had definitely decided on holding a Vanderbilt cup race next fall, time and place to be announced later.

Present at the meeting of the executive committee on Friday were President Hotchkiss, Secretary Elliott, F. B. Hower, N. H. Van Sicklen, L. E. Myers, A. G. Batchelder, James T. Drought and F. T. Sholes and the first business taken up was the report of the president concerning the plans and policies of the association for the ensuing year. This paper favored a continuance of the present policy and included a progressive increase in membership and a substantial increase in the work and functions of the various national boards. Among other things favored by the president was a national convention of the association, with particular reference to legislation and good roads, at some central point during the summer season.

In defining the work of the various boards, President Hotchkiss favored a continuance of the present agitation looking toward the adoption of a federal registration bill and if possible to secure sufficient demand and pressure to pass the bill at the present session of congress. He hopes for increased activity both in the touring board and in the corresponding committees of the state associations and clubs, looking to the aggregation and analysis of touring information available to all the members without charge. He urges that the work of erecting sign boards throughout the country be pushed with vigor.

President Hotchkiss defined the work of the racing board as follows: "In racing, a Vanderbilt cup race in the fall, as already announced, its rules to be formulated and made public not later than January 1, if possible; control, through the sanctioning power, of all speed contests in the country, and if possible a stock touring car or other races on the public roads in connection with the national convention of the association already referred to." As regards the technical board he says: "In technical matters, the adoption at once of general rules regulating sanctions and the control of technical events by such board, and its promotion of technical contests in different parts of the country during the summer season, in particular, one or more, in connection with the national convention previously mentioned."

Interpreted, this is taken to mean that the racing board's power will be divided with the technical board, the latter body having the complete say in every contest in which there is anything of a technical nature. This would bring under its jurisdiction the stock car race, hill-climbs and reliability runs and leave to the racing board the Vanderbilt cup and the track races.

The matter of track racing was taken up by the executive committee which heard the report of its special committee on sanctions, adopting it with a few changes. Under the new scheme clubs and associations applying for sanctions must have been members in good standing for at least 3 months prior to the application in order to get the permit. Applications for a sanction will not be received earlier than 60 days prior to the date set for the event, while there must be a liability clause on each ticket sold which will relieve the promoting club from liability in case of accident. In order that the A. A. A. may be assured that the track is safe each application must be accompanied by a photograph or series of photographs showing the turns and location of the grand stand and also drawings and specifications of the track, fences and structures adjacent. The club or organization must have examined the track and fences and certify it thinks the meet can be held with reasonable safety to spectators and participants. The racing board will nominate the referee from a list of responsible persons furnished by the promoting club. Finally, after all these conditions have been complied with, the racing board will issue the sanction in which it will be specified the number of cars that may take part in any one heat and the upward limit of the horsepower of such cars, the latter to be fixed by a formula to be prescribed by the technical board.

Particular care will be taken in the case of international road races and beach contests. No sanction will be granted until the racing board is satisfied there is a sufficient number of bona fide entries to insure the success of the affair. All officials must be approved by the racing board and the sanction fee will be proportionately larger and based upon the importance of the event and the supervision and responsibility involved. Before a sanction can be granted for an event of this character the consent or approval of either the board of directors or the executive committee must be secured. The promoters will not be allowed to advertise or announce any entry until the entrant has signed and delivered a regular entry blank and paid the entry fees. Each entry blank must stipulate the minimum number of the contestants for each event scheduled for the meet.

After this work has been disposed of the executive committee proceeded to take in several new members, among them being the Savannah Automobile Club, of Savannah, Ga.; the Automobile Club of Hawaii, and the California State Automobile Association.

With its duties outlined as a result of this meeting of the executive board, the technical board assembled Friday and organized under the direction of Chairman Van Sicklen. David Beecroft, of Chicago, was made secretary of the board and the committee was enlarged by the appointment of three new members representing the steam interests—Windsor T. White, of Cleveland; De Haven Caldwell, of Chicago, and F. E. Stanley, of Newton Falls, Mass. This done Chairman Van Sicklen brought up the proposed stock car race, appointing A. L. Riker, Edgar Apperson, Henry Souther, E. R. Thomas and Henry Ford a committee to draft rules for the contest. It was the sense of the meeting that the race be run early in the summer and that the west should get the plum because the east has the Vanderbilt cup race. It was reported that there is a 28-mile circuit north and west of Indianapolis that would be ideal for the purpose, so A. C. Newby, Edgar Apperson and H. O. Smith were appointed a committee to secure the consent of the authorities to use the course. It is said the roads around Indianapolis are fully as good as those on Long Island and that it would be possible to run off a 600-mile race as outlined.

CHICAGO PROTEST SETTLED

Chicago, Dec. 9—Three protests lodged as a result of the recent 600-mile reliability test of the Chicago Motor Club have been settled, Referee F. C. Donald sustaining the decisions of the judges in the cases of the Rambler, Studebaker and Auburn. Objections were made by the Rambler people to the penalties on the brake and for damage done to a lamp, but Referee Donald held that as one brake did not hold equally as well as did the other, as prescribed by law, the committee acted within its province. As for the lamp, the referee declared he could find no evidence to prove it had been broken in the garage. The Auburn claimed a mistake in the measurements, but Mr. Donald points out that these measurements were made in the presence of the Auburn driver and by him certified as correct. The Studebaker claim regarding the penalization for holding open the muffler cut-out with a piece of wood was answered by pointing out that the muffler cut-out really was inoperative

because of a slack cable. These decisions clean up the work of the officials of the run outside of the distribution of the certificates of merit which will be ready this week. The prizes have been awarded and now the technical committee is at work on the records of the run, which will be published in book form. This will be most complete and will show exactly what happened to each car and the details of the penalizations. These books will be distributed by the motor club.

AT PEACE WITH A. A. A.

Chicago, Dec. 11—The disagreement between the A. A. A. and the Chicago Motor Club, which resulted in the latter demanding the return of its fees because it had been ruled as in arrears, due to a misunderstanding, has been settled by a conference with the national officers, so it was announced last night at the annual meeting of the motor club, and the latter has been made a member of the state association by making a new application, the previous charges having been wiped out. The motor club's election resulted as follows: President, F. C. Donald; first vice-president, W. L. Githens; second vice-president, Edward Rowan; secretary-treasurer, G. G. Greenburg; directors, J. V. Lawrence, C. P. Root, David Beecroft, H. P. Branstetter and Carl Metzger. On Henry Paulman's motion it was decided to appoint a committee to secure for Chicago the start of next year's Glidden tour. Also the club decided to become actively identified with the sign board movement.

MAJA MAKES ITS DEBUT

New York, Dec. 8—A new European car, the Maja—pronounced My-yah—has made its first bow in this country. It is being introduced by the Maja Co., which has established an American branch at 230 West Thirty-eighth street. The Maja belongs to the Daimler family, the builders of the Mercedes having turned over their entire Austrian plant to its manufacture. The car gets its name from another daughter of Herr Jellinek, her eldest sister having contributed the name Mercedes to the Daimler product. The Maja, except in Germany and Austria, will be sold by the Maja Co., with branches in London, Paris, Stuttgart, Hamburg, St. Petersburg and New Pork, at prices below those of the Mercedes, it is stated.

EARP SMASHES RECORDS

New York, Dec. 10—Special telegram—Cable advices from London tell of more record-breaking stunts by the Napier, this time the driver being Clifford Earp, who drove a 60-horsepower machine against what might be called short-distance records. He did 50 miles in 39 minutes 10 seconds, an average of 47 seconds to the mile, and 150 miles in 1 hour 58 minutes 34 seconds. In the hour he accomplished 76 miles 453 yards and in 2 hours 151 miles 146 yards. These record-breaking feats took place at Brooklands.

PLANNING A BIG OVAL

Quakers Organize To Construct a 2½-Mile American Brooklands in Delaware County

Philadelphia, Pa., Dec. 9—With mile horse tracks unpopular with the motor car race governors and the use of the common roads for speed events frowned upon by the authorities, it behooves the advocates of the sport to seek some safer locale for indulgence in their favorite pastime. Philadelphia, than which there is not a more enthusiastic racing center in the country, already has taken the first steps towards supplying a substitute. A few weeks ago there was organized in this city an association which will lay down a 2½ miles concrete and cinder track, 100 feet wide on the straights, with an additional 25 feet put in at the turns, which will be a quarter of a mile long, with a 30 per cent bank. This Quaker City Brooklands will be located on a 213-acre tract of land —already bought and paid for—at Llanerch, in Delaware county. The land, generally speaking, is level, well drained and admirably suited to the purpose. Llanerch is a typical suburban village, located about 2 miles west of the Sixty-ninth street terminal of the Market street elevated road. The terminal is but 17 minutes away from the city hall and Llanerch but 5 minutes from the terminal.

Louis Bergdall, the millionaire brewer and head of the Bergdall Motor Car Co., which handles the Imperial, Benz, Welch and Berliet cars here, is president of the new company, which is called the American Motordrome, while William M. F. Magraw, a well-known local real estate magnate, who originated the scheme, will do the work. The course itself, Mr. Magraw says, can be finished by June next. The immense club house, grand stand and field seats will come later. At present engineers are engaged in planning the track and laying out subway entrances from the Westchester pike and City Line road, which form two sides of the motordrome tract, the other side of the triangular piece of ground being taken up by the grounds of the Delaware County Country Club.

The affairs of the track will be conducted by a club, to be formed in the near future, the officers of which will have sole charge of the property. The immense club house will possess all the conveniences of the finest similar establishment in the country, and the membership fees will be fixed at a rate which will be sure to attract not only all Philadelphia motorists who enjoy speed contests, but many out-of-town owners and about all the manufacturers and their representatives in the country who believe in the advertising value of such competitions.

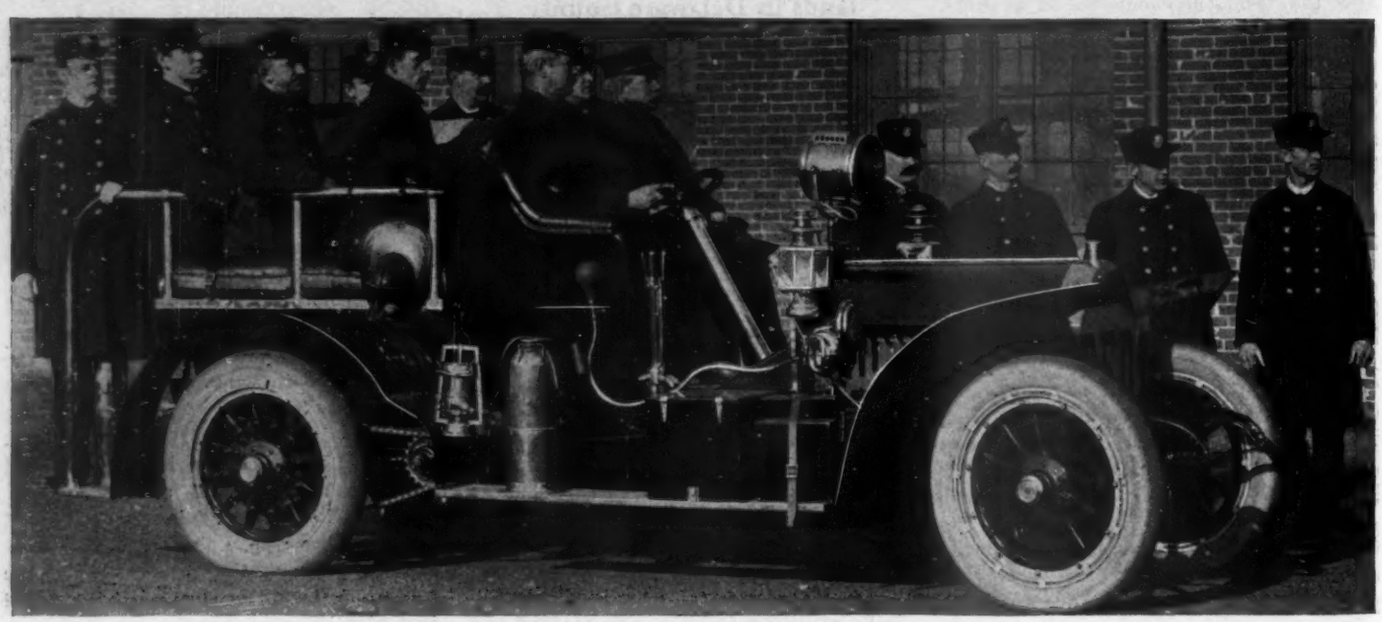
It is the intention of the promoters, besides the conveniences for automobilists such as repair shop, electric-charging plant, plunge and other baths, etc., to lay out in the infield golf links, tennis courts, baseball and football grounds—in fact, all the accessories of an up-to-date country club.

Last Saturday the Automobile Club of Delaware County, Pa., gave a banquet to a score of borough councilmen and county road supervisors to interest them in its plans of road improvement and to endeavor particularly to bring about the early rehabilitation of the old Baltimore pike, which is now in a horrible condition for most of its length. The object of the Delaware countians is to secure the cooperation of Chester county motorists and officials and improve the road all the way to Oxford, near the state line, and at the same time to interest the Marylanders to begin a similar work at their end, in the hope that in a couple of years there will be such a road between Philadelphia and Baltimore and the south as will do away with the long detour via Lancaster and York. When the Philadelphia-Baltimore route is in shape, the improvement of the road from Oxford to McCall's ferry would give a much more direct route to Gettysburg and the west than that at present via Harrisburg. Another meeting will be held in January, which road supervisors and commissioners controlling the roads as far as Chadd's Ford will be invited to attend. Meantime the Good Roads Association of Delaware county, which was unofficially launched at Saturday's meeting, will have become a reality.

GROWTH OF EXPORTS

Washington, D. C., Dec. 7—Two hundred and one motor cars, valued at $276,198, were exported from this country during October, as against 186 cars, valued at $201,748, exported during the corresponding month of last year. This is the gratifying fact presented in the latest compilations of government statisticians. Exports of parts declined in value from $45,346 in October, 1906, to $41,870 in October last. During the 10 months ended October last, 2,622 cars were exported at a total value of $4,718,676, together with parts valued at $563,277. The enormous increase that has taken place in this trade is indicated by the fact that during the corresponding period of last year the combined exports of cars and parts were valued at only $2,356,110. In other words, the exports of motor cars during the first 10 months of this year were more than double those of the same period of 1906, and the indications are that the exports for the entire year will go considerably beyond the $5,000,000 mark. Three years ago these exports barely reached $1,000,000, and the fact that this foreign trade has grown to such enormous proportions in that short length of time speaks volumes for the worth of American cars and the enterprise of American manufacturers.

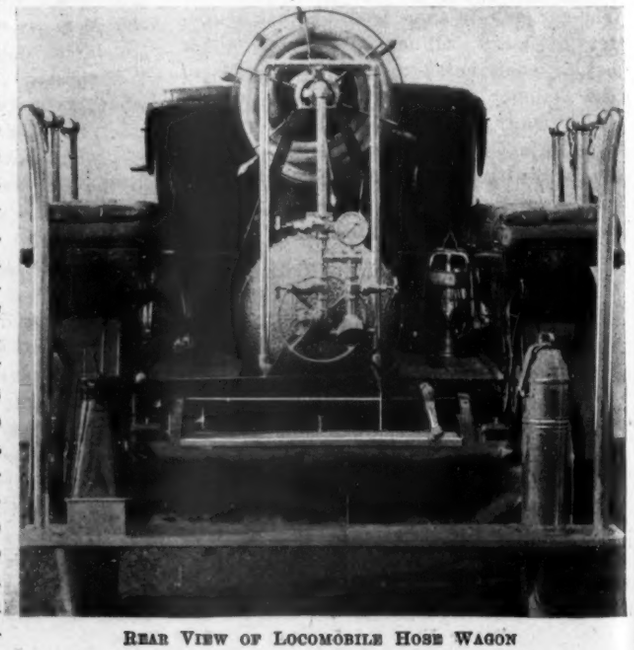
The Realm of the Commercial Car



LOCOMOBILE CAR TRANSFORMED INTO HOSE WAGON FOR FIRE DEPARTMENT USE.

THE transforming of pleasure vehicles into commercial or industrial cars is one of the very conspicuous tendencies of the present season and incidentally can be considered a criterion of the demand for commercial machines as well as the scarcity of specially designed commercial cars for such uses. During the entire fall announcements have followed one another from week to week telling of this maker or that maker transforming his standard car into a specially designed hose or fire wagon; of another maker fitting an ambulance body onto a stock chassis; and of another turning a pleasure car into a patrol wagon or an insurance patrol. The tale of this transformation has only begun and from week to week come notices of the many makers following the example of others. The field of these special wagons should be filled by regular commercial car builders, as done abroad, but if in America the number of builders of commercial cars is so limited that they cannot supply the demand, then it must be expected that the builder of pleasure cars will launch into the transformation field. It is a grave question as to whether this is best for the industry; in fact it is a problem of great conjecture, for there is scarcely a person who would not prefer to see these special cars built by the regular maker of industrial machines.

One of the latest cases of pleasure car transformation comes from the factory of the Locomobile company, the example being the transforming of a 60-horsepower chassis into a fire department wagon capable of carrying the members of the department as well as a first-aid chemical wagon and a sufficient length of hose. The Locomobile wagon illustrated on these pages was sold to the fire department of Bridgeport, a special order having been placed for the vehicle. The motor develops nearly 60 horsepower and on a trial run maintained a speed of 50 miles per hour. The transmission is a four-speed selective, with final drive by side chains. The pressed steel frame is made from alloy steel, heat treated. The machine has for fire-fighting purposes a 50-gallon Babcock chemical tank, hose, hose reel, small hand extinguishers, crow bars, axes, helmets, and other fire-fighting paraphernalia. Warning is through an auto-chime and bell; the wheelbase measures 123 inches; the total weight approximates 4,200 pounds; and the tires are 36 by 5 inches pneumatics of the Fisk demountable type. The vehicle is intended to be in direct charge of two attendants who have for a couple of months been studying Locomobile constructions. A feature of the equipment is an electrical apparatus whereby the acetylene searchlights can be lighted from the seat without striking a match. The passenger accommodation in addition to room for one man beside the driver is confined to facing rear seats with room for three or four men on each side, and extra standing room on the rear step for a couple. The brass railing forming a back for the facing seats is a good support for helmets, lanterns, etc., and in short the car is equipped in full fire-fighting regalia.

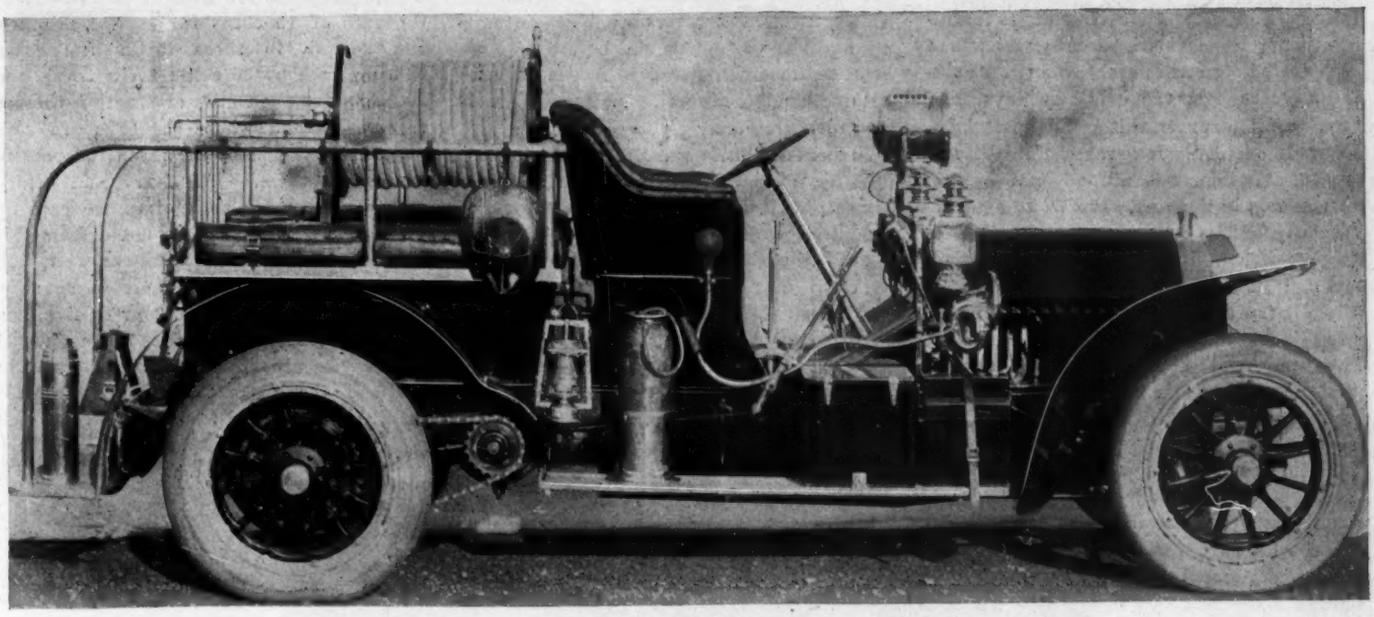


REAR VIEW OF LOCOMOBILE HOSE WAGON

WHITES FOR BRAZIL

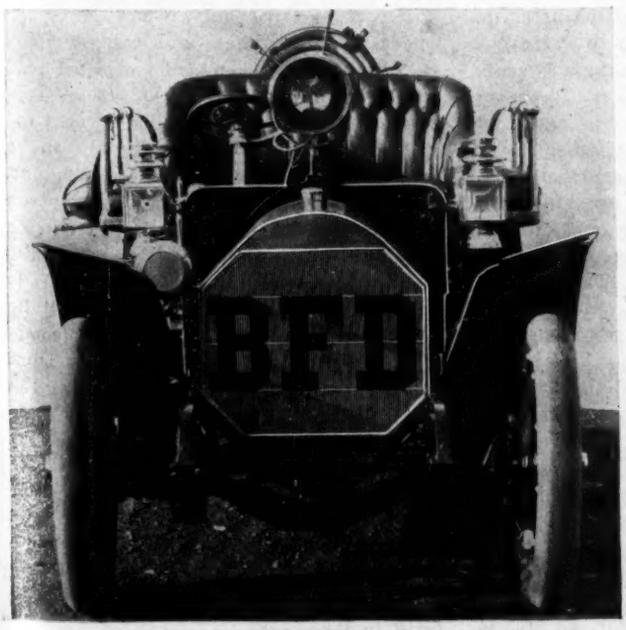
The shipment during the last week of three White steam patrol wagons for the use of the police force of Rio Janeiro, Brazil, has served to call attention to one of the features of the American car industry, namely, the steady demand for American cars in all parts of the world. The White company has been particularly active and successful in the development

Industrializing the Pleasure Car



SIDE VIEW OF LOCOMOBILE CAR TRANSFORMED INTO FIRE DEPARTMENT WAGON

of its export business. The three patrol wagons are on the standard 30-horsepower chassis. The body is built in accordance with specifications supplied by the Brazilian government. The coat-of-arms of Brazil is conspicuously painted on either side. The body is sufficiently commodious to seat from thirteen to fifteen malefactors. This shipment is by no means the first which the company has made to a foreign government. More than a year ago the government of Holland bought five White chassis supplied with special bodies, and these machines are now used for carrying the mail in remote regions in the island of Java, one of the most prosperous of the Dutch possessions. For 3 years there has been a steady stream of experts of White steamers to Japan. A single company, the Osaka Jidosha, a semi-official corporation, operates no fewer than twenty-nine White steamers on its bus lines in the vicinity of the city of Osaka. It is in England that the White has obtained a stronger foothold than in any other foreign country. A branch was established in London as far back as 1901.



FRONT VIEW OF LOCOMOBILE HOSE WAGON

ST. LOUIS GETS IN LINE

A company known as the St. Louis Auto Exchange Co. has been organized in St. Louis for the purpose of establishing an electric motor bus line. Forty-five large motor cars have been purchased and soon will be in operation on the streets. Twelve of the cars are to be used for hotel service and these cabs will make regular trips between the union station and all the principal hotels. This will be appreciated by visitors to the city who are strangers, as many of them would not know what street car would take them to a certain hotel, while the motor cars will take them to any hostelry. There also are to be about ten sight-seeing cars, which will be operated from the union station to all points of interest in the city. These cars will carry from fifteen to thirty passengers. On Sunday the machines will make trips to the Forest park and the art museum. Ten of the motor buses will traverse the downtown streets, carrying passengers from one part of the city to another. Then there will be six opera coaches, which will be rented to theater parties. Most of the other machines will be used as touring cars and will be rented to parties. C. J. Lewis and Hugo Kock are the promoters of the company and state that the cabs will cost more than $100,000. They expect to have them in operation in a very few days. Mr. Kock said if the enterprise proved a success, more cars would be put on the line.

As in St. Louis so in other cities the populace is surely and rapidly coming to the conclusion that the motor car is excellently adapted to every phase of transportation. This is particularly the case with reference to sight-seeing and passenger transportation in large cities. In the heart of large cities motor transport is much quicker than street car travel and added to this is the extra value of motor transport due to the routes being along streets on which street cars are barred or on which tracks have not been deemed a valuable investment. The sight-seeing car, the passenger coach or bus and the theater cab are par excellence as city vehicles for renting uses and the advent of the taxicab into New York will help their more general introduction very considerably.

TAXICABS IN NEW YORK

In an official statement issued this week the officers of the New York Transportation Co., which operates 500 taximeter electric cabs and gasoline vehicles in Gotham, calls attention to the indifference of American motor car manufacturers to an al-

ready established home market which has compelled the company to buy abroad $150,000 worth of European-made cabs. When fire early in the year destroyed 300 of its cabs the company said it had no other alternative than to buy abroad, in spite of a high tariff, in view of its inability to purchase American cabs which had been tested for street use. American makers 2 years ago, the company says, had been urged to enter this commercial field, but were decidedly lukewarm. This necessity of buying cabs abroad and paying duty stands in the way, says W. H. Palmer, secretary of the company, of a further reduction of cab fares. Mr. Palmer further says: "In the matter of cab building, I think it is admitted that Americans are 2 years behind their foreign competitors. Two years ago I begged certain makers in this country to turn out motor cabs and try them out in actual service. They seemed to regard the cab market as a doubtful one, and now that the growing demand is fully established, they are unable to sell us tested cars. Abroad many makers have had such cabs on the streets from 1 to 2 years and you can buy cabs which have a working record. An untested cab is a very hazardous investment. Consequently, we had to buy $150,000 worth abroad, pay the heavy duties and freight and crating charges and suffer the long delay in delivery. These foreign-made cabs are far from ideal for use in America. In the first place, abroad they do not have our snow and ice to battle with. In the second place, they are made for trained chauffeurs which are far more plentiful and not so highly paid as are American chauffeurs. Moreover, repair work abroad is so cheap that the makers do not take this into consideration in building. Over here, labor is high and the repair item on foreign cabs is very important. In France, they do not care if it takes a day and a half of cheap skilled labor simply to repair a transmission, but here such a repair would eat up profits for hundreds of miles of service. Moreover, many of the parts have to be imported, but even where we make them at home, the replacing of parts is costly. On many new cars we have to begin by putting new rims on the wheels to fit American tires. Yet in spite of these great disadvantages and our consequent wish to get cabs of American design adapted to our labor conditions, we are practically helpless, as almost all American car skill has gone to the development of the pleasure car. I hope, however, that American makers will soon wake up to the situation and build and test cars on the streets. If they succeed in making a good American cab they will not lack orders. For the taximeter motor cab is just in the infancy of a great future. American manufacturers are, however, now awake to the situation and before long we hope that we can purchase American cabs with as much satisfaction as we buy American pleasure cars."

In London, Paris and Berlin, where taxicabs have been in use for some time the taxicab tariff has caused continued turmoil and consequently, with the advent of the taxicab into New York, some discussions on tariff may be anticipated soon. The New York Transportation Co. under the direction of W. H. Palmer, which operates cabs, uses three schedules. The first schedule is for hansom cabs or other two-passenger vehicles. A red indicator on these cabs shows the tariff in use. The initial charge, which pays for the first ½ mile or the first 18 minutes' waiting after the appointed time for the cab to enter into service or any fraction of both, is 30 cents. Each additional ¼ mile is 10 cents, so the first mile is 50 cents and each additional mile 40 cents for either one or two passengers. Each additional 6 minutes' waiting after the first 18 cost 10 cents. The second schedule is for landaulets or other four-passenger vehicles and for these vehicles are two schedules. The first one, shown by a red indicator, is for one or two passengers. The initial charge of 30 cents pays for the first ½ mile or 12 minutes' waiting after the appointed time for the cab to be at the passenger's service. Each additional ¼ mile costs 10 cents, making the first mile 50 cents and each additional mile 40 cents. Each additional 4 minutes' waiting after the first 12 costs 10 cents. The third tariff, or rather the second tariff, for four-passenger vehicles is indicated by a black indicator and for three, four or five passengers, is 30 cents for the first ⅓ mile and 10 cents for each additional ⅙ mile, making the cost for the first mile 70 cents and for each additional mile 60 cents. This fare is for either three, four or five passengers. The charge for additional waiting beyond the first 12 minutes is at the rate of 10 cents for each 4 minutes. In addition to these tariffs are extra charges such as 20 cents for a trunk and 20 cents for each mile or fraction thereof from the stand where the cabs are kept waiting to the point at which the passenger wants them. All ferry and bridge tolls, both coming and going, are paid by the passenger. It will be noted from this schedule that two pasengers can use a cab as cheaply as one and there is not any difference whether three, four or five passengers use them. The fare to be charged is shown by a colored indicator showing in the dial above the taximeter instrument and in each cab is a taximeter tariff which tells what the charges are so that every user can familiarize him or herself with the cost of the trip before the end of the journey, thereby eliminating any unnecessary waste of time by requiring the driver to explain the instrument.

WHITE STEAMER IN BRAZILIAN POLICE WORK

At a recent meeting in Paris held by those interested in the future of motor cabs, after considerable discussion regarding the fourteen different tariffs which are allowed to be charged by the Paris taxicabs, a decision was come to in respect to the endeavor to get the authorities to regulate the price to be charged by motor cabs plying for hire. The present regulation provides for a maximum tariff only, which is so notoriously high that no cabs employ it, while the various tariffs charged lead to confusion. The proposal to be submitted to the prefect of police covered the following prices: One tariff only to be or 8 cents per kilometer. Price per hour, 60 cents, 8 cents per kilometer to be given as indemnity when the car is left outside Paris, and 5 cents additional whenever the number of passengers exceeds three. It is probable a tariff like the above will be adopted, but the prices may be ruled somewhat higher, since the meeting was more or less a partisan session of those using the motor cabs. The owner has yet to have his say. Everyone agrees, however, regarding the advisability of having one tariff only for any motor cab plying for hire, whatever the power of its motor, the character of the bodywork or the livery of the driver. These latter are some of the reasons which caused a variation of tariff in times past.

Acetylene Gas as a Motor Fuel

MOTORISTS who run out of gasoline when miles from a town or city where the precious liquid can be purchased may find solace in the fact that their acetylene gas tank, used for supplying illuminant for the headlights, contains the wherewithal to take them to the gasoline depot. Acetylene gas has during the last 10 months been proven a competent fuel for the gasoline engine, and while few motorists would take the chance of running on it continually because of the expense as compared with gasoline, yet when benighted on a country road with the last drop of gasoline out of the tank the acetylene tank is a veritable life preserver. P. C. Avery, of the Avery Portable Lighting Co., Milwaukee, has made not a few experiments with the contents of the Avery gas tank as a fuel reservoir and on every occasion he has discovered that the acetylene gas not only will keep the motor going but that it actually gives more power than the gasoline mixture, thereby enabling the car to ascend hills that would be impossible to climb with the Standard Oil Co. mixture. Mr. Avery's experiments were made with an Autocar runabout which was acetylenified by mounting a tank filled with acetylene dissolved in acetone on the left end of the seat. The connection between the gasoline tank and the carbureter was severed and a union established between the gas tank and the carbureter so that the acetylene gas entered the carbureter through the same spraying nozzle through which the gasoline found entrance. The air passages of the carbureter were not even adjusted, and in running the car, variations in motor speed were made by simply controlling the valve on the gas tank so as to regulate the amount of acetylene gas consumed. The experimenter discovered that with acetylene the spark could be advanced much further without any perceptible piston pounding and note was made of the fact that the explosions were more violent and quicker than with gasoline, the experimenter claiming that an acetylene mixture in exploding occupies less time than does the gasoline mixture, as the flame travels through it at a much higher rate of speed. Undoubtedly due to this fact was the additional observation that on climbing hills the car showed considerable more power than when driven on a gasoline fuel and it was possible to make steep ascents that never had been ascended with gasoline. When the quantity of acetylene feeding to the carbureter was varied slightly the motor speeded up or slowed down much quicker than with gasoline; the assumption being that the control of the acetylene gas was not sufficiently delicate for the nature of the gas. In regular traveling Mr. Avery found a mixture of 3 per cent acetylene gas and 97 per cent air suitable for all work with the Autocar, but which mixture might call for variation when used with different designs of motor and different sizes of cars.

It might be argued by drivers and car owners that if acetylene gas gives a more powerful and quicker explosion then the water or air-cooling facilities of a gasoline motor would not be sufficient for the acetylene needs and that on short or even comparatively long run overheating of the cylinders would develop. It is scarcely needless to remark that such was not the case and that heating was entirely absent on runs extending over many hours and on all kinds of roads. This may be due to one or more causes. If it be granted that the acetylene gas explosion is quicker, then the explosion force on the piston head is expended earlier in the stroke than when gasoline is used and more time remains for the cooling process, in that a longer fraction of a crankshaft revolution is left for the dissemination of the heat. Further, the absence of carbon within a combustion chamber is to a large extent responsible for absence of heat. When a piston head and the combustion walls become coated more or less with carbon the dangers of preignition as well as decreased heat radiation administer largely to the generation of additional heat, but using acetylene gas out of a tank in which it is dissolved in acetone it is a fact that the acetone escaping with the gas destroys the carbon in that acetone is one of the good solvents of carbon. Thus, using the acetylene gas means a clean piston and combustion chamber and no heating troubles. In test runs of 10 and more miles under the most adverse conditions the Autocar motor showed no signs of heating.

It is not expected that acetylene gas will to any extent replace gasoline as a motor fuel nor are these lines intended as a recommendation for such use of acetylene, but it often happens that a driver finds his gasoline tank empty when 10 or more miles separate him from his garage or any convenient gasoline depot. In such exigencies the tank of compressed acetylene is a most useful adjunct in that by its use the car can be run home at a speed as great as that possible with gasoline. The control is a little more difficult in that one person is required to handle the valve on the acetylene gas tank to regulate its flow, but even a control could be attached for caring for it if a long run had to be made by a single person. As to the quantity of acetylene necessary for a mile or so as to the amount of mileage in a full acetylene gas tank little is known, as complete experiments of that nature have not been made. Experiments might prove that 3 per cent of gas and 97 per cent of air is not the best mixture and that if this is the most suitable mixture for one carbureter it might not be the best for another design of carbureter. All of these details would have to be worked out by the driver according to his carbureter and motor.

AUTOCAR RUNABOUT FITTED FOR USING ACETYLENE GAS

The value of acetylene gas as a motor fuel has been a subject of experiment in varying degrees for several seasons, many makers having used it for starting a motor in very cold weather. Indeed there are motorists who have used common illuminating gas to run their motors on when idle and such fuel is a most powerful one. Motors that could not be induced to start on a gasoline mixture have been readily started by the use of illuminating gas or acetylene gas. One or two standard car builders have added acetylene starters, consisting simply of a supply tank for the gas and a conduit.

Water Vs Oil in Motor Car Radiators

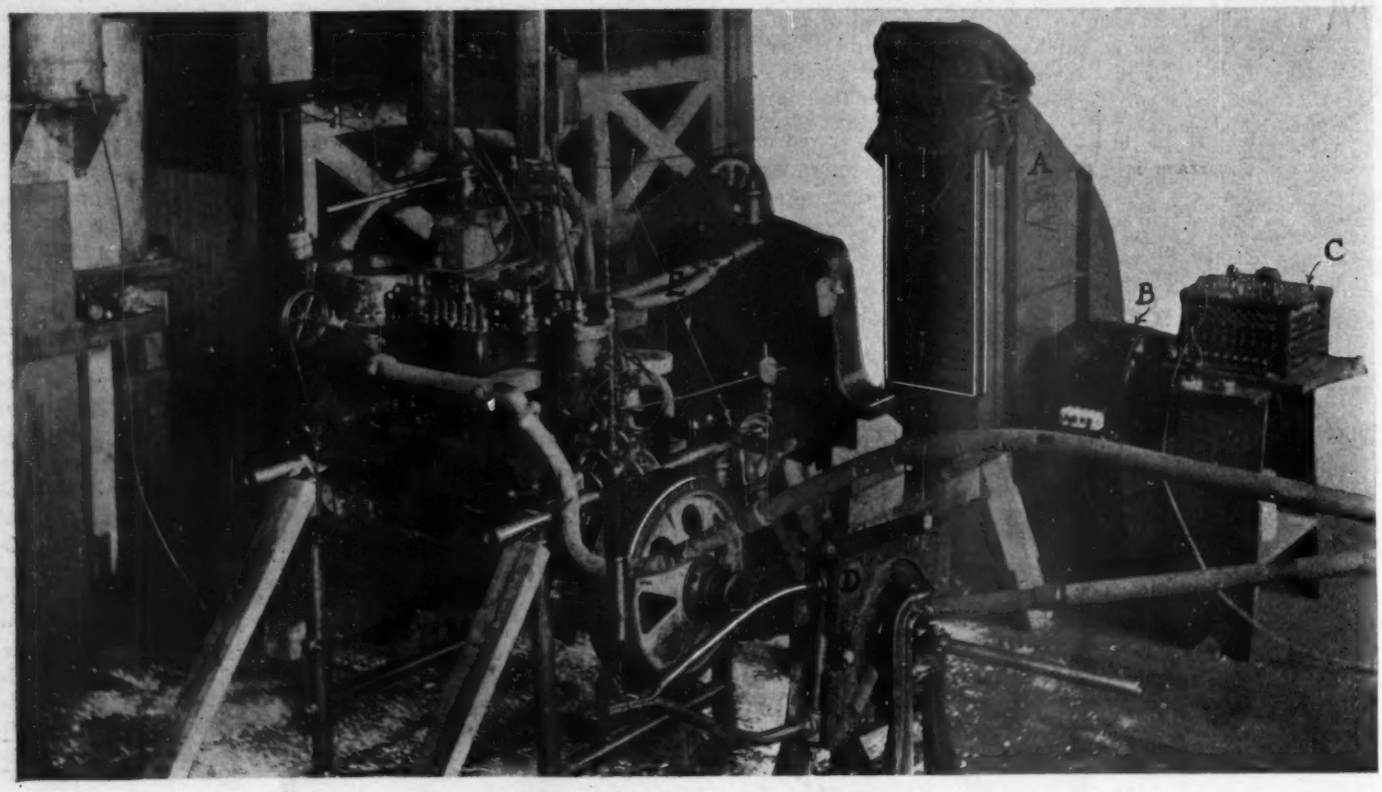


FIGURE 1. TESTING OIL COOLING IN A MOTOR AS CONDUCTED BY H. B. MCFARLAND

THERE are few cars on the road today that have properly designed radiators. It is well known that the hotter the jacket water the more efficient the engine, and that the temperature should be maintained as constant as possible. Usually there is an evaporation of the jacket water from the radiator during a hard run, but if the radiator is of sufficient capacity for a maximum cooling effect, it will cool too much for light running and the jacket water temperature will not rise sufficiently to insure economical working.

The relation between the power developed and the refrigerating effect is well known, about twice as much heat being carried away by the jacket water and dissipated by the radiator as is converted to useful and available power. An actual horsepower is the conversion of 42.4 heat units into work every minute, so that a radiator must dissipate about 85 heat units per minute for each horsepower developed. If a radiator can dissipate 850 heat units per minute, it will take care of 10 actual horsepower continuously. If more power be developed the jacket water temperature will rise until it reaches the boiling point, when the surplus heat will evaporate the jacket water. As it takes 966 heat units to evaporate a pound of water, the evaporation of each pound of water per minute will produce sufficient refrigerating effect to care for 11 actual horsepower. Developing 30 actual horsepower in the motor means that the radiator must give up about 2,550 heat units per minute, and few radiators can possibly dissipate over 1,000 heat units per minute; no ordinary radiator will do even this under the best conditions.

There is a general impression that a motor cannot be successfully cooled with oil on account of its low specific heat and other thermal capacities. This impression has been confirmed by letters, published in various motor car journals from time to time, giving the experiences of those who have made actual experiments in oil cooling their motors and found the results unsatisfactory. The practical experimenters have condemned the system without ascertaining what conditions were necessary for its success. Oil cooling by the "one" man, on his "one" car, and in his "one" way may be unsuccessful, but with the right conditions it has proved a success.

The apparatus was arranged as shown in figures 1 and 2. In order to get the same effect of air impact on the radiator as when a car is running at various speeds, air was forced against the radiator by means of an Andrews & Johnson blower A direct connected to an electric motor, B with rheostat C arranged to give air velocities of from 5 to 40 miles per hour. The blowing apparatus is shown plainly on figure 1 to the right in front of the radiator. The water was pumped through the cylinder jackets in the ordinary way and the weight of water pumped per minute ascertained as well as its temperature to and from the radiator. The velocities and temperatures of the air at front and back of the radiator were carefully measured. The actual power developed by the motor was measured with a pony brake D supported on independent bearings so as to leave the motorshaft entirely free in its bearings. Pipe connections E were made from the top of the radiator to a Silent Knight motor which was used to heat the water or oil, and from the bottom of the radiator connection was made to either of two weighing tanks F clearly shown in figure 2.

Using water in the jackets, four types of radiators were tested under the same series of velocities and temperatures. These radiators varied greatly in the number of square feet of radiating surface that they contained; moreover, there was a great difference in the ratio of wetted radiating surface to extended radiating surface. Radiators Nos. 1 and 2 were alike except that in No. 1 the extended surfaces were sweated on by dipping the radiator into a hot solder bath, while on No. 2 the surfaces merely had close mechanical contact. No. 1 proved to be 10 per cent more efficient on account of

this difference. No. 1 dissipated 593 heat units with a temperature drop of 25.4 degrees through the radiator; No. 2 gave up 536 heat units with a drop of 21.7 degrees; No. 3 gave up 727 heat units with a drop of 28 degrees, and No. 4 950 units with a drop of 32.2 degrees.

Comparisons of the results obtained with radiators composed entirely of wetted surface with those obtained from radiators having a large proportion of extended surface, indicate that the heat dissipated by the extended surface is but a small percentage of that dissipated by the wetted surface, and that the extended surface could be materially decreased in most radiators with little or no decrease in the cooling effect. Increasing the initial temperature of the jacket water to the radiator not only greatly increased the efficiency of the engine, but showed a large increase in the heat-dissipating effect.

The air space through most radiators is too small, as increasing the air velocity in front of the radiators from 10 to 15 and then to 20 miles per hour produced very little increase in the cooling effect and in the velocity of the air at the back of the radiators. The actual air velocity that could be maintained through the different types of radiators to cause a ready transfer of heat was much lower than is generally supposed. The temperature of the air at the back of the radiators was generally low enough to show that the depth from front to back could be increased with advantage.

The radiators used in all the tests were plugged to prevent loss from evaporation, and the temperature of the water was carefully kept below the boiling point. Whenever such power was taken from the engine there was a very quick rise in temperature, so that when water was used the engine could only be run under this condition for a short time. A continued run would have brought the water above the boiling point, and have generated steam at a high pressure. In practice the heat developed would have been carried away by evaporation, but during the tests no water was allowed to evaporate. This point did not appear when oil was used, as the temperature of the boiling point of the oil was more than double that of water.

While there was no trouble cooling water to the thermal capacity of the radiator, yet, when oil was passed through instead of water, with all the other conditions constant, there was great disparity of results. One type of radiator which cooled water effectively gave very poor results when oil was used in it. In fact, the radiator giving the poorest results with water gave the best results with oil. It is no wonder that some who have tried oil cooling have found it a failure. It was impossible for them to do otherwise under the conditions imposed. A careful study of the circulation in different types of radiators and the thermal properties and capacities of oil and water soon made it evident that the conditions of circulation were far different for water and oil.

EDITOR'S NOTE—These tests were conducted by H. B. McFarland, professor of applied mechanics and thermo-dynamics, Armour Institute, in the interests of the Owen Thomas Motor Car Co., which concern is manufacturing an oil-cooled engine for its touring cars.

The complete results of the test with oil-cooling will be made public at a future time, together with the tests of the motor designed especially for oil-cooling. The conditions imposed by the piping connections and jacket details of the motor designed for water cooling did not permit the test with oil to be carried to the limit, but, as a matter of fact, the motor in question did better with oil than with water after the best conditions of oil circulation were determined. A good comparison of results can be had from the last tests of one radiator with both oil and water. It was found that with a temperature drop of 12 degrees with oil the radiator gave a cooling effect of 700 heat units; when water was used only 70 per cent as much heat was radiated, although the air velocity was raised sufficiently to give a temperature drop of 25 degrees. Another radiator gave the same cooling effect with a temperature drop of 40 degrees for water and 18 degrees for oil. All the radiators used were standard makes designed for use with water. The results of the tests indicate that the best radiators using oil on this system are 50 per cent more effective than they are with water under ordinary conditions. The engine also can be made more efficient because oil can be used at a much higher temperature than water in the jacket without boiling. The results of some recent tests on a 40-horsepower engine give the friction losses in horsepower at different temperatures of jacket water as follows:

Temperature of water from jacket	69° F.	150° F.	185° F.	208° F.
Loss on horsepower...	7.1	5.5	5.0	4.5
Mechanical efficiency..	85%	88%	89%	90%

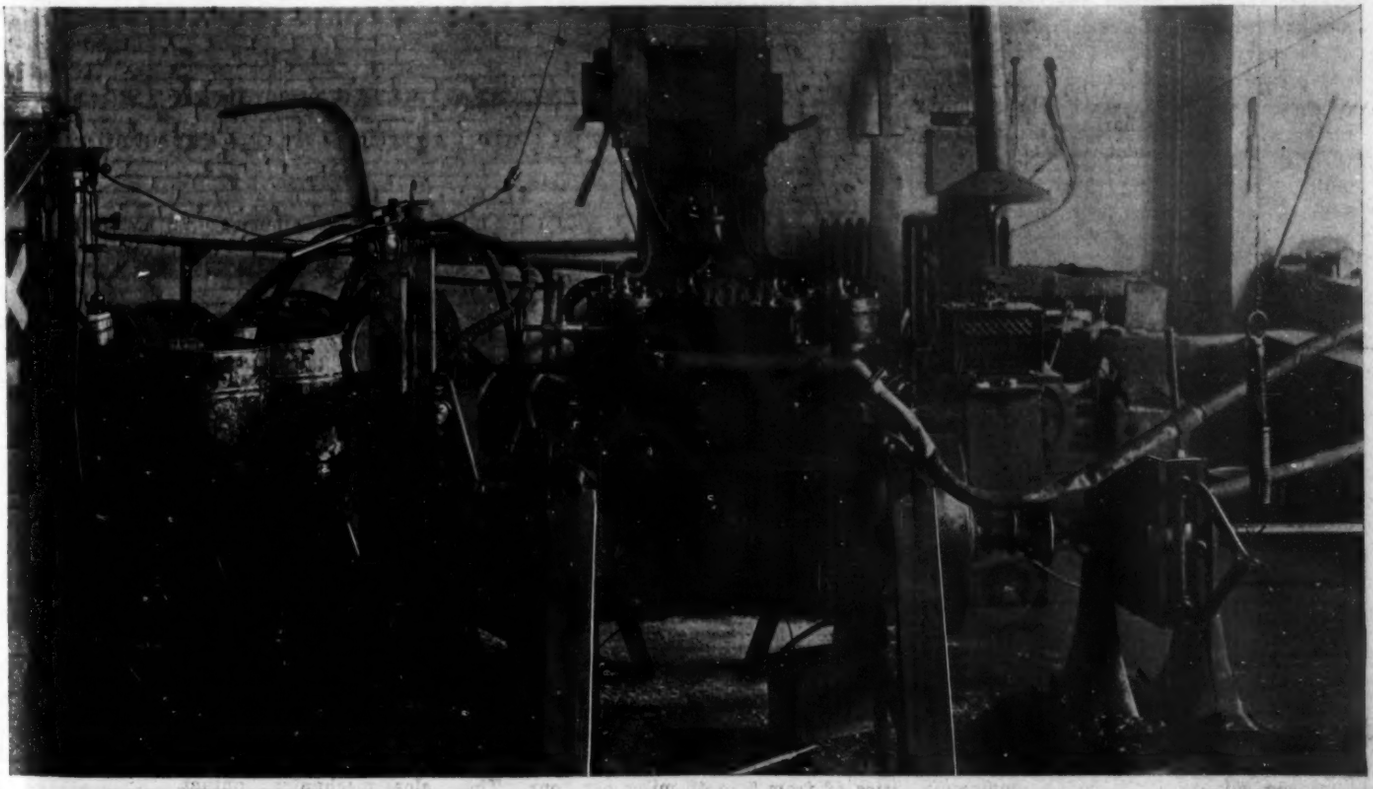
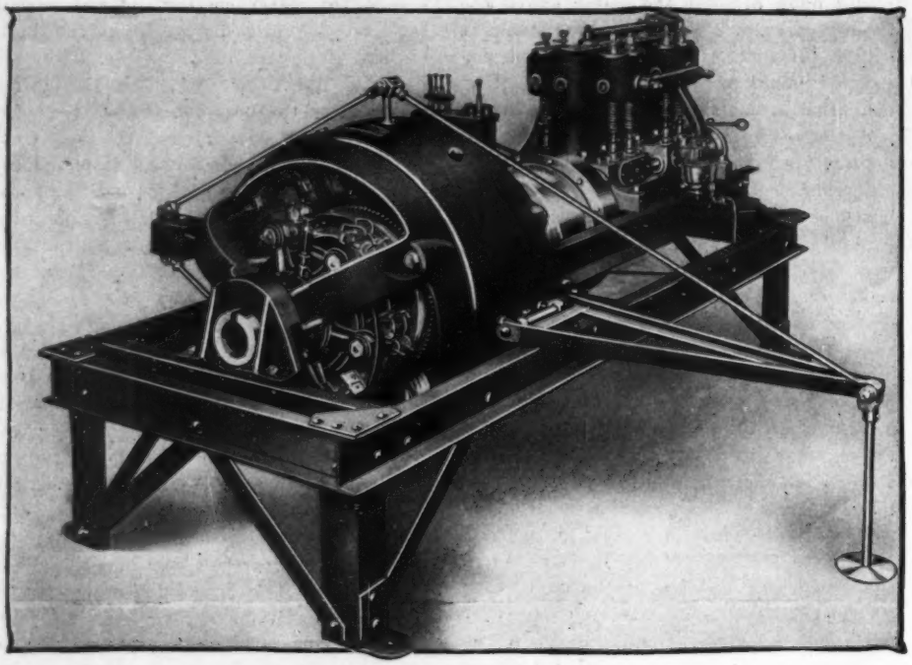


FIGURE 2. OIL COOLING TESTS IN THE INTERESTS OF THE OWEN THOMAS MOTOR CAR CO.

The Dynamometer as a Motor Testing



SPRAGUE DYNAMOMETER COUPLED WITH A GASOLINE MOTOR

WITH the refinement in construction and design of motor car engines has come a corresponding demand for accuracy in testing these engines before placing them in cars. In the early days of the industry the horsepower test was what the car would do on a road. As the industry developed the pony brake was ushered into use and while as a system of testing it offers every possibility of accuracy still a number of makers feel that it is possible to show a vastly exaggerated horsepower rating with it, particularly if the manufacturer desires to do so. The pony brake, while a cheap testing plant, is not well adapted for continuous tests, such as where a motor is placed under load and compelled to carry that load for successive tests. For this work the electric generator has come into popular use. This scheme of test consists in yoking an electric generator direct to the crankshaft of the motor and coupling it to banks of electric lights so the engine has to supply so many electric power units for maintaining the bank of lights. With this test the electric load can be maintained constant for hours without much trouble on the part of those conducting the test. This simplicity of the test as well as the minute accuracy of it and the possibility of maintaining a constant load for an indefinite time have made the electric light test popular.

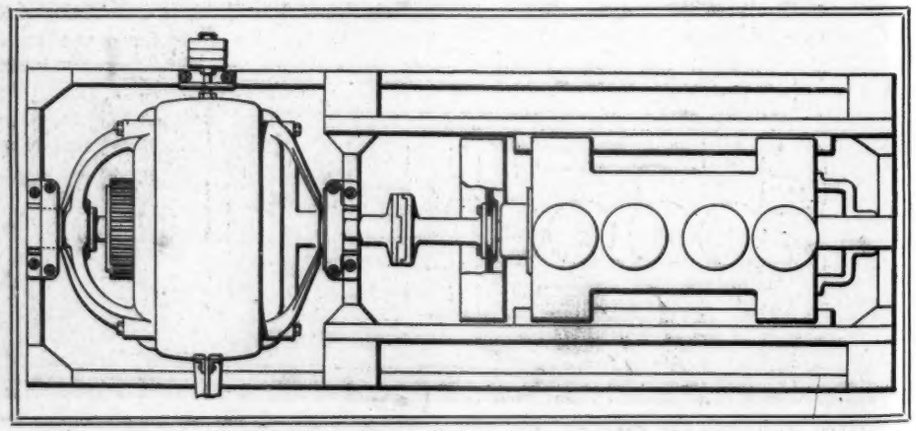
To meet the demands for an electric test the Sprague Electric Co. has brought out an electric dynamometer specially designed for testing gasoline engines and which is herewith illustrated as well as shown by a couple of line illustrations. The electric dynamometer offers an easy, accurate and efficient means of obtaining instantaneous values of the brake horsepower of an engine and also for placing the motor under full load for a long time without excessively heating the dynamometer. This dynamometer differs from the well-known pony brake in that the reaction of the friction is replaced by an electric reaction instead of by friction heat. Its general arrangement consists of a specially-constructed direct current generator with compensating poles. The generator field frame consists of a cylindrical magnet yoke to the inner side of which the poles are bolted, each pole supporting a field coil. Brackets which contain the bearings are bolted to the end of the yoke, the front bracket carrying the rocker arm. Special bosses are cast in the end brackets for receiving ball bearings which support the entire generator, in such a manner as to permit of the field frame oscillating concentrically with the armature.

The movement of the field frame is limited by means of a stud on the outside of the yoke which projects through a slot in a forging secured to the side of the supporting frame. The length of the slot therefore determines the arc through which the field frame can move. Two arms, one short and the other longer, extend horizontally from opposite sides of the field frame to which they are rigidly secured. The short arm carries at its outer end a metal box to receive the necessary amount of lead to counter-balance the field frame on its ball bearings. The long arm is provided at its outer end with a hanger similar to that on an ordinary platform scale, on which slotted weights may be placed. The engine to be tested is set in position and bolted to the supporting frame in alignment with the dynamometer. The two shafts are then connected together with a flexible coupling and the engine started.

The torque exerted by the armature is transmitted to the field and tends to rotate the field frame in the same direction as that in which the armature is turning. By placing weights on the hanger attached to the long arm previously mentioned, the torque is readily measured. The horsepower HP developed by the engine may then be found by using the following formula. In this formula W = the weight in pounds on the hanger, D = the distance in feet from the center of the armature to the weight; and S = the speed of the engine in revolutions per minute.

$$HP = \frac{W \times 2D \times 3.1416 \times S}{33{,}000}$$

It will be noted in this formula that the only variables with a given dynamometer are the weight W and the speed S. If a curve be drawn or a tabulation made showing the horsepower developed at different speeds, an ordinary mechanic can perform



PLAN ILLUSTRATION OF SPRAGUE'S TESTING DYNAMOMETER

Device

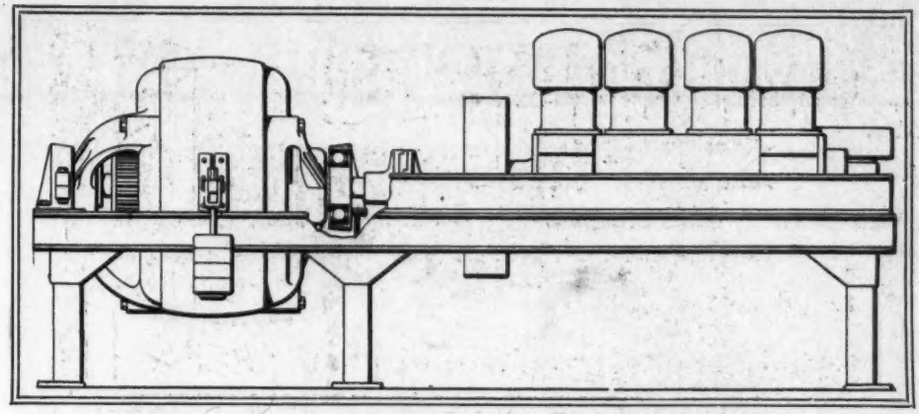
the tests without making any calculations. The voltage and current produced by the dynamometer do not enter into the calculations. In some cases it is possible to utilize the current generated by the dynamometer by connecting direct to the shop wires and operating the dynamometer in parallel with the generators already in service. Under these conditions variations in the engine speed can be obtained very easily by adjustment of the rheostat in the field circuit of the dynamometer. If it is not convenient to utilize in this way the current generated by the dynamometer, it can readily be absorbed or dissipated in a water rheostat.

With the arrangement just mentioned, in which the dynamometer is operated in parallel with the shop generators, it is also possible to use the dynamometer as a motor to start the engine, taking power from shop mains or an outside supply circuit, thus saving the labor of cranking. This use of the dynamometer also affords an accurate means of determining the torque necessary for starting the engine and for testing the engine frictional losses under various conditions.

Electric dynamometers are manufactured by the Sprague Electric company, in sizes from 10 to 100 horsepower, and any one of these sizes is capable of operation over a wide range of speeds and loads. A structural steel frame for supporting the dynamometer and gasoline engines of various sizes is also provided.

In England and France as well as in Germany the manograph has taken its place as a motor-testing device, not in that it estimates horsepower, but rather because it reveals to the experimenter or tester exactly what happens in each of the cylinders of a motor all the time it is in operation. The manograph shows cylinder compression, the period of explosion in all cylinders, compression and exhaust pressure. By means of it the tester can determine if he is opening his valves at the best moment and if he is keeping them open long enough or not. The manograph shows if he has the same compression in each cylinder, thereby giving a clue to faulty castings, poorly seating valves, improper induction pipes, air leaks or any of the other many faults that might be discovered. Hand in hand with this, the manograph tells of the tale of exhaust pressures; should they not fall to atmospheric pressure as desired or should back pressures be present.

To continue a step further, the story of the manograph aids in the design of the cam contour, for by using differently-shaped cams and noting the results achieved with each the engineer can definitely determine the most desirable shape for the generation of power or quietness of running, as well as having a guide as to the best average cam for all conditions. Lastly comes power, the great feature of motor engine design and construction and with the manograph at hand the engineer can get the highest explosion pressure in each of the cylinders of his motor and also the rate of pressure fall.

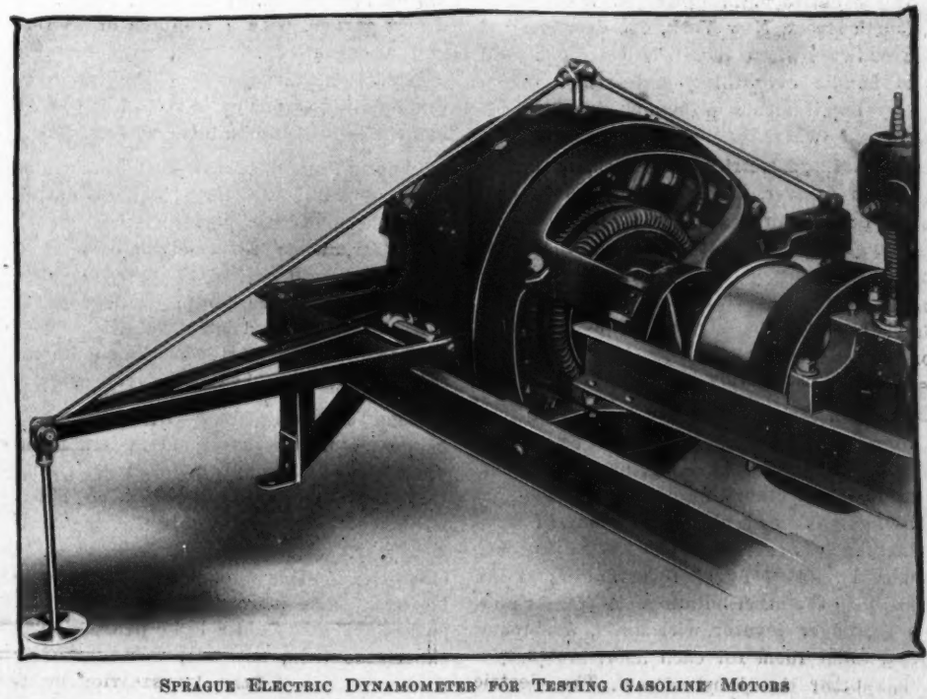


ELEVATION OF SPRAGUE DYNAMOMETER TESTING PLANT

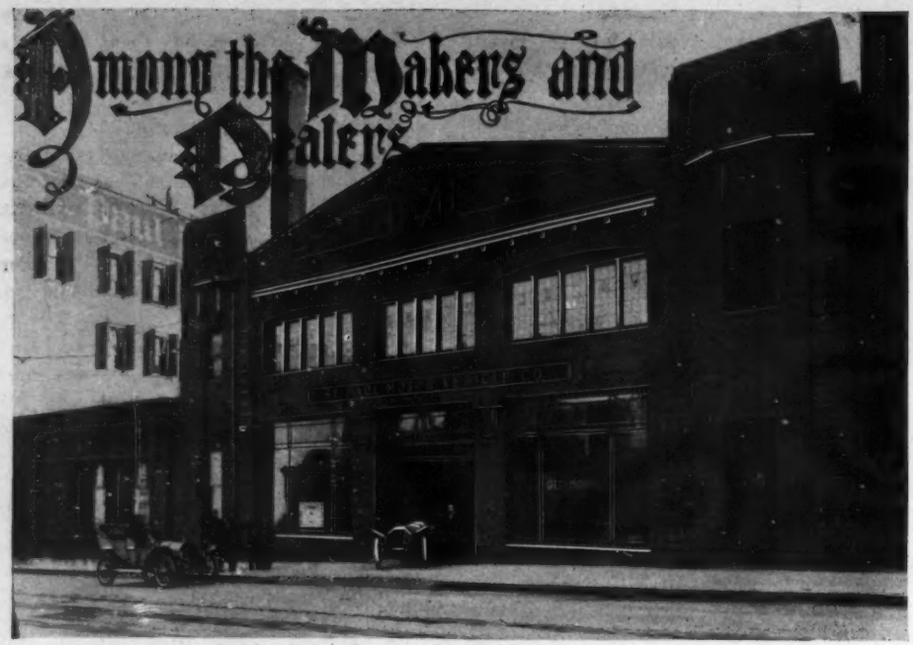
All of these factors are traced graphically on a chart in the form of a continuous curve, one portion of which shows the induction stroke, another the compression stroke, a third the explosion stroke and the fourth the exhaust stroke. Compared with its results, the manograph is a most simple device, consisting of a set of small mirrors supported on diaphragms actuated by the varying pressures within the cylinders and oscillated by a connection with the camshaft, so that as the camshaft movement oscillates the mirror from right to left the pressure within the cylinder rocks it up and down, with the result that the combination of these two movements is reflected by a light onto a tracing screen. The motor can be started and the tester watch the happenings within each cylinder, provided he has a manograph for four cylinders.

Among the many American builders not a few peculiarities in detail testing have arisen. The Stoddard-Dayton company uses the bank of electric lights and combines with this a four-cylinder manograph so that the tester can see, when the engine is pulling any desired horsepower, just how the different compressions stand in each of the four cylinders. The Rambler concern has at great expense fitted a most modern testing plant. The Berliet motors are tested by a peculiar hydraulic system in which the crankshaft of the motor is yoked direct to large circular disks revolving in separate enclosures and to which enclosures water is admitted.

The day has arrived when every maker must have installed in his factory some authentic and quick method of determining the horsepower each of his motors is capable of producing. Makers who have taken chances along this line have paid dearly for it; and designers now realize that chances are suicidal.



SPRAGUE ELECTRIC DYNAMOMETER FOR TESTING GASOLINE MOTORS



NEW GARAGE OF ST. PAUL MOTOR VEHICLE CO. IN ST. PAUL, MINN.

Burdick a Sales Manager—Starr A. Burdick has been appointed sales manager for the Spicer Universal Joint Mfg. Co., of Plainfield, N. J.

Magoon's New Line—R. H. Magoon, of Cleveland, has made changes in his line and next year will feature the De Luxe, the Chadwick and the new Jewell four-cylinder.

Estep With Packard—The Packard Motor Car Co. announces the engagement of E. Ralph Estep as its advertising manager after January 1. Mr. Estep will be located at the home offices of the company.

Change of Address—The National Battery Co. announces that owing to its increasing business it has taken possession of the entire building at 236 West Fifty-fourth street, New York, one door west of Broadway, where it will be fully equipped to handle everything pertaining to battery requirements of manufacturers, dealers and owners.

Handling Electrics—The Electric Garage Co., of Denver, Colo., with $5,000 capital, has been incorporated by George D. Lee, Leander G. Sterrett and L. B. Brown. The company is occupying a new building, 50 by 150 feet, in one of the residence districts of the city and which is used for the storage and repairing of electric vehicles exclusively.

In Its New Building—The Brown-Lipe Gear Co., of Syracuse, N. Y., is now quartered in its new building, an example of up-to-date fireproof construction. The building is so absolutely fireproof that no insurance is carried. It is 138 by 60 feet, with an ell 87 by 60 feet running at an angle to the main building. A freight and a passenger elevator, with stairs, washroom and toilet room for each floor, are placed in another ell 25 by 28 feet, leaving the main part of the building with a floor area of 10,080 feet unbroken by openings. The building was constructed according to the Kahn system. The Brown-Lipe Gear Co. manufactures gears and transmissions.

Denver Consolidation—The Smith Automobile Co. and the Nyles Byron Automobile Co., of Denver, have consolidated and the name of the Denver Motor Car Co. adopted.

Concern in Trouble—The Atkinson Auto Garage Co., of Lockport, N. Y., has filed a petition in the United States district court in Buffalo. Its debts amount to $2,066, and its nominal assets are $3,909, a large part of which consists, it is said, of uncollectible accounts.

One of St. Paul's Finest—The St. Paul Motor Vehicle Co., of St. Paul, Minn., has a new garage, with a frontage of 78 feet and a depth of 169 feet, with concrete construction throughout. The property this building stands on is valued at $80,000 and the cost of the building was $27,500.

Imports Show Increase—Importations of foreign cars show a large increase during November on the corresponding month last year, when ninety-eight cars at a total appraised value of $372,762 were brought in. In the month just ended 145 cars were imported at a total value of $428,435. The importations of taximeter cabs this autumn has been very large.

Hope for Spring Show—While there will be no motor car show held in San Francisco this fall it is believed by many that there will be an exhibition about February. This was the time of the show last year, which was most successful in every way. Every dealer then reported he had much more than made his expenses and many did a large business. The experience then, however, was that after thes how was announced many prospective buyers held back for weeks until they could look over all the cars in a bunch at the show. Consequently at the present time the dealers do not propose to shut off their immediate sales.

Dupont Handling Loziers—The Dupont Garage Co., of Washington, D. C., agents for the Columbia and Corbin cars, has taken the agency for the Lozier line in the District of Columbia.

Bosch Magnetos in London and Paris—It is claimed that in the Olympia show 90 per cent of all the cars shown were equipped with Bosch magnetos. In the Paris show of all cars, chassis and motors 68 per cent were thus equipped.

Lindoerfer Out With Logan—F. C. Lindoerfer, who for the past 3 months has been associated with the sales department of the Logan Construction Co., has severed his connection with the company, and is no longer associated with it in any way.

Auto-Bi Co. Started—The Auto-Bi Co. has filed a certificate of incorporation in the office of the country clerk, Buffalo. Business will be begun with half of the capital stock of $50,000. The directors are Clarence E. Becker, William C. Chadeayne, John W. Van Allen, Nelson S. Hallett and Arthur R. Jenkins.

Michelin Coming—Edward Michelin, head of the Michelin company, is due to arrive in this country to visit the company's American factory at Milltown, N. J. His nephew, M. Hauvette-Michelin, a member of the executive committee, will arrive on December 18 to remain at the factory for an indefinite period.

Opens Panhard Agency—The Panhard is the latest foreign car to establish an agency in Boston. George J. Gould has been sent to the Hub from New York and he has taken the quarters formerly occupied by the Shawmut car, on Boylston street. Mr. Gould is a regular representative of the concern, importing the cars in New York, the company deciding to establish its own agency.

After French Exhibits—Four members of the Importers' Automobile Salon were at the Paris show arranging for the transfer of exhibits to the Madison Square garden exhibition. They were Paul La Croix, of the Renault branch; E. Lillie, of the Italia Import Co.; A. M. Archer, of Archer & Co., importers of the Hotchkiss, and G. M. MacWilliam, of the Darracq Motor Co. Mr. La Croix has returned.

Corbin Deal Surprises—The Boston dealers were given another surprise last Friday when the announcement was made that the Corbin company had decided to discontinue its branch there, and had made arrangements to have George J. Dunham take the agency for the car. It is only a short time ago that the factory made the Boston office a branch agency. It was formerly conducted by E. T. Kimball. Mr. Kimball was placed in charge when the reorganization was made. Mr. Dunham

has the Royal Tourist, and he will still remain at his old place on Columbus avenue. The Corbin had a big place in the Motor Mart.

Is a Cadillac Recruit—E. R. Benson, who has for a number of years been connected with the Hartford Rubber Works Co., and who lately has been secretary of the company and in charge of the sales department, has resigned to accept a place in the sales department of the Cadillac Motor Car Co., Detroit, Mich.

A Gold Medal for Studebakers—The Studebaker Brothers Mfg. Co. has been notified by the Jamestown exposition jury of awards that its exhibit of motor cars, street sprinklers, garbage and dump wagons, contractors' wagons and trucks has been awarded a diploma and gold medal for vehicles of that class.

C. S. Johnston Resigns—C. S. Johnston, who is the designer of the Continental, at New Haven, Conn., has resigned as manager of the company, and has also sold all his stock in the concern. He will be succeeded as manager by C. A. Moeller, the president of the company, who will be assisted by his son, Herbert A. Moeller.

Dolson Matters—Henry C. Briggs, of Kalamazoo, Mich., referee in bankruptcy, to whom was referred the Dolson bankruptcy matter by Judge Knappen of the United States court at Grand Rapids, has named December 17 as the time for the first meeting of the company's creditors. At this time a trustee will be elected. A schedule of assets and liabilities is now being prepared. The factory may be continued as a motor car plant. If so, it will be under the management of the heaviest creditors.

New Franklin Promised—The addition of an entirely new model to the Franklin line of motor cars has just been announced from Syracuse. The new type is to be a brougham body on the chassis of the model G 16-horsepower runabout. The steering wheel and control will be inside. The new model will be the lightest gasoline brougham on the market, weighing only 1,700 pounds. On account of the short wheelbase, 92 inches, it will turn easily and can be driven with ease in narrow or crowded streets.

Maxim Will Build Electrics—A light electric victoria phaeton is announced as the leader of the line of cars to be built at Hartford, Conn., by H. P. Maxim, former chief engineer and designer of the Electric Vehicle Co., and T. W. Goodridge, former general manager of the Studebaker Automobile Co. Its makers promise some interesting features in construction. The chassis is of steel of a peculiar formation. The cross members are firmly secured to the main frame without the use of rivets, and the main members are not weakened by excessive drilling. All the weight is suspended above the springs, which makes it possible to use solid rubber tires. When cars are fitted with the solid tires the twin type will be employed. There are no gears aside from the differential.

Temple Handling Rapids—The Ralph Temple Automobile Co., of Chicago, has has taken the agency for the Rapid commercial vehicles.

Ransom Adds Two—C. S. Ransom, formerly manager of the Albany Garage Co., Albany, N. Y., has obtained the agency for Albany and vicinity for the Lozier and Stevens-Duryea.

Colt's New Vocation—W. L. Colt, formerly president of the Cleveland Automobile Co., of Cleveland, has become connected with the Hampton Advertising Co., of New York city, in charge of that company's soliciting force.

Davis Joins Michelin—Charles A. Davis, formerly with the G & J Tire Co. as Pacific coast manager, is another prominent tire man who has joined the selling force of the Michelin Tire Co. Mr. Davis will be the special factory representative to the Pacific coast trade.

Williams Takes the Winton—R. H. Williams has just been appointed the Baltimore agent for the Winton Motor Carriage Co. Thomas C. Goodwin, formerly of the Baltimore Motor Carriage Co. and for years prominent in local automobile affairs, will be associated with Mr. Williams in the business.

Change in Gotham—The Autolyte Mfg. Co. has acquired the motor car department of Sibley & Pitman, of 26 Warren street, New York city, and moved to the building occupied by them, taking offices on the first floor. Through the election of Mr. Pitman as treasurer and a director of the Autolyte company, Messrs. Sibley & Pitman have become interested in the business. A. H. Funke will continue to act as manager, and the concern will in the future carry not only the lines which it has been handling, but those formerly handled by Sibley & Pitman, including their specialties.

Thompson With Locomobile—George T. Thompson, formerly manager of the Eastern Automobile Co., which handled the Lozier and Stevens-Duryea in Philadelphia last year, has joined the selling force of Irving J. Morse, manager of the Quaker City branch house of the Locomobile Co. of America.

Will Handle the Stearns—The Allen-Swan Co., of Brooklyn, N. Y., has been incorporated with a capital of $27,000. L. H. Allen is president and Halstead Swan secretary and treasurer. The new company has secured from Wyckoff, Church & Partridge the Stearns agency for Long Island.

Thayer in for Himself—Harry A. Thayer, who has been with T. Neville & Co., of Oshkosh, for the past year, and formerly with the O. F. Weber Co., of Chicago, has purchased a half interest in the motor department of the Mechanical Supply Co., of Marinette, Wis. The new company is known as the Thayer Automobile Co. and will carry a complete stock of accessories. Mr. Thayer is getting out designs for a four-cylinder runabout which will be manufactured by the Marinette Iron Mfg. Co.

New Buffalo Concern—The Empire State Tire Co., of Buffalo, has recently incorporated for the purpose of manufacturing and selling a number of new things under the Greenwald patents. In its new building, at 198-200 Terrace, a tire repair department has been installed. As superintendent the company has secured the services of Lemon Greenwald, who until recently was at the head of the Akron Pneumatic Tire Co., and prior to that time superintendent of the Goodrich factory.

PLANT BUILT FOR BROWN-LIPE GEAR CO. IN SYRACUSE, N. Y.

THE READERS' CLEARING HOUSE

ELIMINATING SPEED GEARS

New York—Editor Motor Age—Although the letter published in Motor Age of October 17 by Mr. Lougheed, in answer to my previous letter, was noticed by me some time ago and I realized it was desirable to reply promptly to such correspondence, I could not find time to do so until now. In the first place, it will be seen from a careful consideration of Mr. Lougheed's letters and later articles that we are more nearly in agreement in regard to the small chance of immediately eliminating the speed-change gear from the internal combustion engine-driven vehicle for practical use—I do not and did not refer to eventual constructions, as they will be greatly influenced by road conditions—than seemed apparent, to me at least, from the statements made in the first article. For instance, it is admitted that speed-change gears may still be of use on commercial vehicles; that the steam engine is slightly more flexible than it will be possible to make any type of internal combustion engine unless the internal combustion engine is very marvelously improved; that even with the flexibility of the steam engine speed-change gears have been found to be of some value and are used on steam vehicles; that a clutch, which is a more troublesome element in the transmission system than a properly designed speed-change gear, will probably be retained; that in order to gain flexibility it will likely be necessary to use a large number of cylinders—a construction which might not be altogether advisable on the type of vehicle in question; that the internal combustion engine can hardly, for some time, be expected to develop much power at fifty revolutions per minute, which is practically saying that not only would the engine not be able to slip the driving wheels at 3 miles per hour if the vehicle is geared to 45 miles at 800 revolutions per minute, but it would be incapable of driving the vehicle up a slight grade at that speed—which might be required when following a team, for instance—without slipping the clutch.

In regard to Mr. Lougheed's statement that the single-geared steam cars have shown up well in short-distance speed trials and on hills I will point out that in all such record performances of any note they have, I believe, been in charge of expert drivers, like the remarkable high-gear runs with gasoline cars, and that this does not prove that in the hands of the average driver and under the average conditions these same cars would not give better results if they had a simple means of getting a low speed for emergencies than they give with their present driving system. As to my not advocating more than two speeds, if I think it necessary in most cases to have more than one I would say that, whereas the vehicle for practical work with one speed would give hardly as satisfactory results as could with the same engine and conditions be gotten if a single additional speed were fitted, a vehicle with this additional speed would be so little inferior to one having an indefinite number of speeds that more than two speeds simply constitute an absolutely unnecessary luxury in most cases. It is not obvious why there is any more need for a block and tackle with a two-speed car—provided the gear ratios are correct—than with one having four or an indefinite number of speeds, but personally I would prefer such a device with even some steam cars having only a single gear ratio, although a horse would probably be more satisfactory, as it is not the short distances where a block and tackle would be of service that count against the single-geared car, but long, hard pulls at an enforced low speed. In the case of the car instanced by Mr. Lougheed as representing the highest attained engine flexibility the fact remains that this car would make a very poor showing on the present American roads if provided with only one speed in competition with cars of the same power having more than one speed.

Although my reference to the Edison battery may not seem to be of much weight, the fact that others had the same views is shown by the publication in, if I am not mistaken, Motor Age of an editorial to the same effect some time ago. There is a considerable difference between the statement of a fact which is evident to every one—the "conservative motor car manufacturer" excepted—such as that to the effect that the majority of cars of the future will cost less than $500 and the claims that were published regarding the Edison battery.

In regard to the question of reversing gear versus the reversing engine—supposing a speed-change gear to be necessary, anyway—I would say that my argument was not for simplicity, regardless of all other considerations, but that a better vehicle of the type in question could be made, at least for some time, with a reversing gear and simplicity is one of its points tending to its superiority. There is some question whether most cars of this type will be fitted with the multiple-cylinder engine necessary for reversing and whether reversing the engine would not have so detrimental an effect on offset cylinders—a construction that may be used in the coming type of car—as to make a reverse gear preferable from this particular cause alone.

It is certainly true that a steam car, as stated by Mr. Lougheed, can be run without using the cut-off lever, like a gasoline car without a spark advance, but at the same time there is a considerable gain in using it properly, and it is hardly provided solely for reversing on most steam cars.

In order to show the superiority of the reversing engine Mr. Lougheed described a very simple form and method of connecting same in his last letter, but as he is mistaken in thinking they require extra parts to operate the reverse of my transmission he has not gained much by describing his construction. As I am afraid this letter is already too long I cannot describe the method by which my gear gets the reverse in detail at this time, but may later, and will only say that it is accomplished by giving a greater movement to the clutch-operating collar, which simply means giving the mechanism already required for actuating the high speed a greater range of movement.

It is not entirely because I am interested in this special type of gear that I disagreed with the prospect of shortly eliminating the speed-change gear from vehicles intended for practical use any more than I believe Mr. Lougheed advocates a two-cycle air-cooled engine simply because he has designed a motor embodying these features. In closing I would say that I would like to have Mr. Lougheed's views on the above, but hardly think I will take up more valuable space in further argument of this speed-change and reverse-gear question, as I have now presented my side of the case, although I am afraid in a not very efficient manner—A. E. Osborn.

WRITE THE TIRE MAKERS

San Francisco, Cal.—Editor Motor Age—Although I have used a certain make of solid tires for more than 4 months with good results on a light runabout which I have just sold, I am a little afraid to put them on a more powerful car that I expect to buy before making some inquiries of a reliable source. On the little car just sold I formed a splendid opinion of this style of tires; in fact, I found the opinions of certain would-be tire experts entirely false. I was told it was impossible to drive a car 15 miles an hour with them on my 16-horsepower car. I also read in the motor car number of a weekly paper that by experiments it had been found practically impossible to drive a car faster than 25 miles an hour on solid

tires, even by using engines of very high power. Though I had no odometer on my car, I know I often covered a distance of 20 miles an hour with my runabout. I have even covered 156 miles in 10 hours, including all stops, over California roads. As regards using solid tires, I think there is much in the way the car is built. I also think there is something in the position of the engine. The engine of my late car was in the body. Whatever was the cause of my success with the tires I can not say, but I do know they were no rougher than pneumatics pumped up hard and that they did not wreck my car. I always traveled as fast as the roads allowed and though I had no way of telling my speed I am positive I have done better than 25 miles an hour on certain stretches of road. What I wish to know is: Do you think they will be practical on a 30-horsepower car weighing 2,800 pounds? Also tell me if there has not been some solid tire trials in this country and in France, and what was the speed.—J. G. J. Moray.

Motor Age does not give opinions on such subjects. Write to the tire manufacturers on the matter. Solid tire trials were held in France last April, in which the speed varied from 21 to 24.7 miles an hour. Thirteen cars competed. The story of the trial will be found in the issue of Motor Age of May 9.

ANENT MOTOR CYCLES

Asheville, N. C.—Editor Motor Age—Will you please give me through the Readers' Clearing House the addresses of the makers of the following motor cycles: Indian, Marsh-Metz, Reading-Standard, F. N., Baby Peugeot, Styria, N. S. U., Excelsior, Triumph, Yale and Merkel. Are there any water-cooled motor cycles and if so give the addresses of the makers. Also please give the address of the maker of the Harley Davidson—G. N. F.

Corona, Cal.—Editor Motor Age—I am looking for a motor tricycle with boxes in front for packages and with a clutch so that the motor can be permitted to run when the tricycle is stopped. Can you give the addresses through the Readers' Clearing House?—Arthur L. Taber.

The F. N., Baby Peugeot, Styria and N. S. U. are foreign-made machines, but Motor Age does not happen to have the addresses of the makers. The addresses of the American makers are as follows: American Motor Co., Brockton, Mass., Marsh-Metz.; Armac Motor Co., Chicago, Ill., Armac; Auto-Bi Co., Buffalo, N. Y., Auto-Bi; Consolidated Mfg. Co., Toledo, O., Yale-California; Curtiss-Mfg. Co., Hammondsport, N. Y., Curtiss; Excelsior Motor and Mfg. Co., Chicago, Ill., Triumph and Excelsior; Fowler-Manson-Sherman Cycle Mfg. Co., Chicago, Ill., Manson; Harley Davidson Motor Co., Milwaukee, Wis., Harley Davidson; Hendee Mfg. Co., Springfield, Mass., Indian; Hornecker Motor Mfg. Co., Whiting, Ind., Torpedo; Light Mfg.

and Foundry Co., Pottstown, Pa., Light; Reading-Standard Co., Reading, Pa., Reading-Standard. Motor tricycles are not popular now, but motor cycles with side or fore carriages are made by some of the makers in the list and probably any one would construct a fore carriage on order, which would amount to a tricycle and at the same time could be used as a motor cycle. The Harley Davidson machine has a clutch. Water-cooled motor cycles have been made abroad, but are not much used on the other side.

CALCIUM CHLORIDE

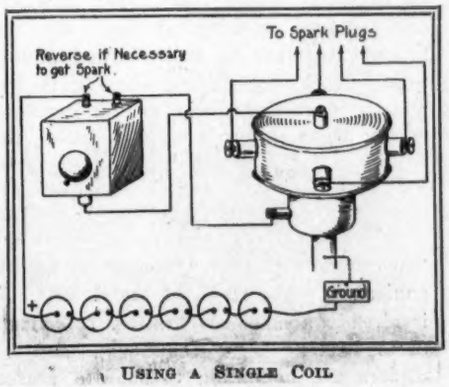
Durham, N. H.—Editor Motor Age—In a recent number of Motor Age there was given a table of non-freezing solutions, among them one of calcium chloride. Was the calcium chloride mentioned the hydrous or anhydrous, that is, do you mean $CaCl_2$ plus $6H_2O$ or just the $CaCl_2$?—C. A. Read.

The calcium chloride mentioned was the commercial or hydrated variety, which costs a good deal less than the other. Calcium chloride solution when heated gives off free hydrochloric acid, which attacks the radiator and water jacket some. If heated nearly to the boiling point it forms a very hard deposit, and for both these reasons its use is undesirable. A solution of denatured alcohol in water, or of equal parts denatured alcohol and glycerine in water, is preferable. The same formulas may be used as in Motor Age October 10, with denatured alcohol substituted for wood alcohol.

USING SINGLE COIL

Plain City, O.—Editor Motor Age—Will you give me your advice through the Readers' Clearing House on the following: I have a single vibrator coil as used on the 1905 Ford double-opposed car. I want this on a four-cylinder car in connection with the distributor and dry cells. Will it be possible and satisfactory? Please give me a wiring diagram of same. —L. E. Roby.

Connect the carbon terminal on the battery with the coil binding post marked "B" or "Batt," and connect the other



USING A SINGLE COIL

primary terminal of the coil with the binding post of the timer forming part of the distributor; connect the secondary binding post at the base of the coil with the central binding post at the top of the distributor and connect the four remaining binding posts of the distributor with the spark plugs in the proper order. Connect the negative or zinc terminal of the battery with the engine. If the primary binding posts of the coil are not marked connect the battery and timer with them at a venture, and exchange the conections of these two binding posts if necessary to get a spark.

FAULTY IGNITION

Schuyler, Neb.—Editor Motor Age—Having a little trouble with a Cadillac single-cylinder runabout, I wish to know if you can give me a little light on the same. In starting in the morning the machine will fire on the first spark, but after running a while and when the machine is left standing I have to take out the spark plug, clean it and then the motor starts at once. I have taken out the plug, but have not as yet found anything to cause the trouble. I have had a number of experts look at the machine, but they can come to no conclusion as to the trouble. The plugs are always clean, so that will not stand for any trouble—W. J. Kunkle.

Apparently there is a short circuit somewhere, so that some of the current in the ignition system is lost. It is possible the coil has become injured in some manner or the timer may need cleaning. It will pay to rewire the machine, and if this does not end the trouble, then borrow another coil for the purpose of trial. After all this has been gone over and if the trouble remains it will be apparent the difficulty is in the timer. If the trouble is found to be in the coil, send it to the maker to have it put in good condition. Be sure, however, that the battery is in good shape.

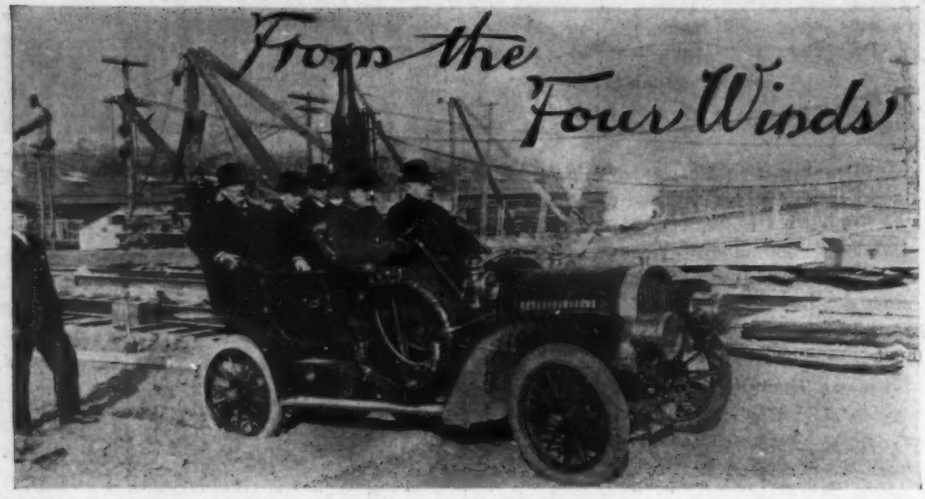
GASOLINE LOCK VALVES

Sedalia, Mo.—Editor Motor Age—Will you please give us information as to where we will be able to get a lock valve for the gasoline line of a motor car so none but the owner with key can use machine. We have seen them, but cannot locate a dealer.—Le Grande Automobile Garage.

There are several such devices on the market, and any of the large supply houses—Excelsior Supply Co., Chicago; Neustadt Co., St. Louis; Motor Car Supply Co., Chicago—ought to be able to supply them.

CIPHER MAKES A DIFFERENCE

Springfield, Mass.—Editor Motor Age—Through the omission of a cipher a very startling statement was made in my letter in the Readers' Clearing House of November 28. Instead of 3 it should read "A simple engine in good order will use per hour 30 pounds of steam per I. H. P."—C. F. M.



POPE-HARTFORD FIRST TO CROSS NEW $1,600,000 BRIDGE AT HARTFORD

Franklin May Enter—The H. H. Franklin Mfg. Co. is contemplating entering a car in the proposed New York-Paris endurance test.

Cleveland Chauffeurs Organize—Cleveland chauffeurs have organized the Cleveland Chauffeurs' Club. Meetings have been held in the Hollenden hotel in rooms adjoining those of the Cleveland Automobile Club, and it is stated that permanent quarters may be located in the hotel. Between the men who own the machines and those who run them the friendliest feeling prevails. The new organization will hold a series of dances and smokers, and arrangements are being made for lectures and educational course. Also there will be an employment bureau.

Demand Motor Fire Wagons—The recent conflagration which wiped out millions of dollars' worth of elevators and grain warehouses at Superior Wis., and Duluth, Minn., the twin cities at the head of the Great Lakes, has brought up the question of using motor fire engines. The proposition to purchase a fireboat is opposed because only the water front could be protected, while with a motor car engine and with flanged wheels all industries in the railroad yards could be protected. The railroad yards at Superior-Duluth are classed with the largest in the world.

MacDonald's Good Roads Jaunt—Connecticut State Highway Commissioner James H. MacDonald has just returned from an extensive trip from the Atlantic to the Pacific. During his absence he took occasion to inspect the roads of the various states in which he happened to be. He accepted the invitation of Samuel Hill, president of the good roads association of Washington, to deliver an address on the subject of good roads. He also delivered addresses at Bellingham, Wash., the farthest north he journeyed; Portland, Ore., and Seattle, Wash. From Bellingham the commissioner traveled south to Los Angeles and here he inspected the oil roads which abound in that section. He learned that oil is used chiefly because it is economical, though trap rock is to be had in quantity. During his absence from official quarters at the state capitol in Hartford, he has been a busy man in every sense of the word. He feels that Connecticut's roads are pretty good, but they could be better, and if he could learn anything new he was awake to the opportunity.

Goddard Resigns—Asa Goddard, for the past 2 years secretary of the Cleveland Automobile Club, has resigned to go into other business, and he has been succeeded by Charles J. Forbes, Jr., who was formally appointed at the last meeting of the trustees of the club. Mr. Forbes is a former Cleveland man who returned recently from Chicago. The new secretary plans to start an active campaign for increasing the membership of the club and also to devote considerable attention to the work of procuring fair conditions in the new Ohio law which will probably be enacted during the session of the legislature this winter.

Chauffeurs Succeeding—Working quietly but systematically, the Philadelphia Mechanical Chauffeurs' Association, which has been in existence but about 8 months, has already gathered into its ranks nearly all the first-class drivers in the Quaker City. The association has secured rooms in the Odd Fellows' building, at Broad and Cherry streets, in the heart of gasoline row, and, besides holding weekly meetings, will establish in the near future an exchange where unemployed members and owners seeking drivers can be brought together to their mutual advantage. Much work along these lines has already been done, and as the keystone of the organization is ability—among the requisites for membership being the passing of a technical examination and the demonstration of the applicant's skill as a driver—local tradesmen and owners are much interested in the success of the organization. The O. K. of the P. M. C. A. is already a much-sought-after recommendation among local chauffeurs, and as owners are beginning to show a preference for its members, there is quite a rush among the unattached drivers to qualify themselves for membership. Besides mechanical ability, candidates must give satisfactory evidence as to character, temperance and general morals before being taken into the fold.

Bison Nominations—The annual meeting and election of officers of the Automobile Club of Buffalo will be held at the club rooms Monday evening next. The following are the nominees: For president, Frank B. Hower; for vice president, John M. Satterfield; for treasurer, Laurens Enos; for secretary, Dai H. Lewis; board of directors, Edward H. Butler, Edward R. Thomas, Charles Clifton, James N. Beyers, George C. Diehl.

First Over New Bridge—To a 1908 Pope-Hartford goes the honor of being the first motor car to have passed over the new $1,600,000 bridge across the Connecticut river from Hartford to East Hartford. W. B. Woolley, manager of the Hartford office of the McManus-Kelly company, the Pope publicity promoter, conceived the idea after reading in the morning paper that a certain owner had been the first man to drive a horse over the structure, of doing the same stunt with a Pope-Hartford of the vintage of 1908. He therefore called up Sales Manager Barkman of the Pope company and all necessary arrangements were soon completed.

Dames Do Good Work—Motorists in the Quaker City are applauding the patriotism of the local contingent of the Colonial Dames of America, who are engaged in replacing the granite mile-stones which were planted along Lancaster pike away back in the early years of the eighteenth century, many of which have long since disappeared. Some of these stones were put in place about 1725. A similar work is in progress along the King's Highway, as the extension of Ridge road was called in pre-Revolutionary days. Twenty-seven of these old stones have already been located, cleaned and recut, and new ones will be made to take the place of the missing ones.

Italian Tendencies—The Italian city of Milan is generally adopting the motor cab. In that city there are fifty cars owned by a private company. They are in three sizes—12-16, 16-24 and 28-40 horsepower—and are of the best Italian makes, handsomely fitted up. Each has an odometer, about the size of a watch, fitted to the axle at the hub of the right fore wheel, which shows the distance run. The rates for hire of these cars are: For the smallest size, a fixed charge of $8 per day plus 25 cents a mile; for the next size, $10 a day plus 29 cents a mile, and for the largest size, $15 a day plus 45 cents a mile. These charges per mile cover the benzine expense and all other charges. The drivers are paid from $20 to $40 per month, and patrons are expected to provide food and lodging on the road and a tip at the end

of the trip. The men are furnished with a livery by the company. Each car carries a complete repair outfit, and the drivers are experienced mechanics. The company states that its net earnings are fairly satisfactory.

Hoosier Road Building—The good roads craze is still on in Indiana, despite the approach of cold weather, and it is probable road making will be continued all winter except during the very coldest weather. Boone county will build 12 miles, Sullivan county 3 miles, and Washington county 2 miles of roads, while Miami county commissioners are preparing to let contracts for no fewer than twenty-three new roads, aggregating about 40 miles. It is estimated that Indiana has spent no less than $5,500,000 this year on new roads under the 3-mile gravel road law passed by the last legislature.

New Use for Motor Car—In a competitive test of high power touring cars, conducted by the Milwaukee Merchants and Manufacturers' Fire and Burglar Dispatch, a Rambler four-cylinder car was declared victorious and Thomas B. Jeffery & Co. were commissioned to deliver three cars to the concern. Emergency motor cars have been placed in service for the benefit of patrons in case of fire, burglary, open safes or vaults, neglected lights or windows and unlocked doors. The Ramblers are dispatched to the residence of an owner to take him to and from his place of business between 6 p. m. and 6 a. m. and are also provided for railroad station service or medical calls. A telephone report of suspicious characters lurking in a neighborhood will bring two detectives in an emergency car at once. The service has been working very satisfactorily as well as profitably.

L. I. A. C.'s New Board.—At its annual meeting last week the Long Island Automobile Club, of Brooklyn, elected the foregoing officers: President, Charles Jerome Edwards; vice president, C. B. Parker; secretary, Russell A. Field; treasurer, Louis T. Weiss; governors for 2 years, J. H. Emmanuel, Jr., Dr. F. M. Sharpe and W. P. Richardson. The annual report showed that the club now has a membership of 428, as compared with 346 a year ago. At the annual banquet, which took place on Saturday night, club prizes were awarded as follows: Louis T. Weiss, the trophy offered by W. P. Richardson, the retiring president, for the member who would secure the largest number of new members during the year, having brought thirteen motorists into the club fold. The Willard P. Reid trophy for the member touring in the greatest number of states went to S. H. Burns, who drove his Packard in seventeen states and the Dominion of Canada. The new president, Charles Jerome Edwards, won the mileage prize offered by J. E. Bristol, having traveled 10,202 miles in his Cadillac without making any extended tours. The prize offered by retiring President Richardson for the member who took part in the greatest number of the regular club runs was captured by Leffert Lefferts.

Tax for Good Roads—The county board of Racine county, Wis., has decided to levy a special tax of .03 mill on all property in the county for good roads purposes. This tax will create a fund of $12,000 annually. Each town through which the system of good roads that is proposed pass must pay a certain part of the expense of improving the roads.

Glidden's Latest Idea—Charles J. Glidden has advanced a novel proposition for the proposed race from New York to Paris by way of Alaska. He says that part of the distance should be covered by balloon. He favors having the contestants drive motor cars so many miles, then get into balloons and try and reach a given point from which they may take their cars again. He says it would make it more interesting and relieve the monotony of a long drive in a motor car. He is going to suggest it to Le Matin when he lands in Paris this winter to continue his balloon lessons.

Impressing the Danes—Commenting on the 10-day international exposition of motor cars and accessories, electric machinery, motor cycles, motor boats, etc., held at the Tivoli gardens in Copenhagen, Denmark, an official report just received by the Washington government states that aside from the opportunity given to compare the relative value of well-known motor cars and to effect sales, the object of the exposition was to impress the Danish government and public with the importance of the motor car industry and to increase their popularity, to the end that road restrictions for their use in Denmark may be reduced. Although relatively of small area, Denmark is exceptionally adapted for motoring, being exceedingly flat, with excellent roads through a most interesting country. Thirty-four exhibits were made by manufacturers or their agents from France, twenty-five from Germany, ten from England, eight from the United States, four from Denmark, four from Belgium and one each from Italy and Sweden. Of these eighty-seven exhibits, sixty-one were motor cars for private use, nineteen were cabs, omnibuses and carts, and seven various.

Asks for Permit—That New York's speedway scheme is neither dead nor even sleeping is indicated by the application made by the Long Island Motor Parkway Co. to the board of supervisors of Nassau county for a franchise to cross various county highways either by bridges or depressions. Enough rights of way have been secured to build a 30-mile stretch of road. It is planned to have this completed in time for the Vanderbilt cup and eliminating trials next October. The supervisors reserved their decision pending a public hearing on December 23.

Wildwood Not Sleeping—The success of the two meets held last summer by the Motor Club of Wildwood, N. J., over the boulevard bisecting that prominent resort was so pronounced that a movement is in progress to insure even greater success for a series of competitions to be held there next summer. Back of Wildwood is a stretch of meadow land, several miles wide and as flat as a flounder, which, by the expenditure of a reasonable sum, could be transformed into an ideal racing course. The plans of the Wildwood club, which are already well under way, include the building of a mile oval, banked on the turns, and sufficiently wide to accommodate a dozen cars abreast. Another feature of the scheme will be the building of a broad boulevard across the meadow land to the main road leading to Cape May in one direction and to Atlantic City and Philadelphia in the other. This new boulevard, which will be a little over 4 miles long, will serve as an excellent course for short-distance, straightaway races, and will be prepared with that end in view. Work on the oval and the boulevard will be begun shortly after the beginning of the new year, it is announced.

START OF FIRST RUN OF CHILLICOTHE CLUB, HOME OF THE LOGAN

BRIEF BUSINESS ANNOUNCEMENTS

Cleveland, O.—The Reese Motor Car Co. has been appointed local agent for the Corbin.

Rochester, N. Y.—The A. Faber Co., now located on Ely street, will soon move into its new building at East Main and Circle streets.

Lima, O.—The Mack-Brocks Co. has just opened its new garage at 124-126 West Market street. The company has the agencies for the Franklin and the Cadillac.

Wausau, Wis.—The Lovenhagen Auto and Garage Co. has sold its garage to the Davis Garage Co. R. L. Davis, of Milwaukee, is to be the manager of the establishment.

Portland, Ore.—Another eastern company is to be represented here in the future. The Corbin Motor Vehicle Corporation has appointed the Covey & Wallace Motor Co. its local agent.

Utica, N. Y.—George L. Banker has opened his garage at 179-183 Blandina street. He will make a specialty of all kinds of repair work and will also conduct an extensive storage department.

New Rochelle, N. Y.—Freeman N. Merritt has been awarded the contract for the erection of the new garage to be built by William G. Barrett. Mr. Barrett recently bought out E. P. Horton in White Plains.

Baltimore, Md.—R. H. Williams has been appointed manager of the new Winton agency in this city. Thomas C. Goodwin, formerly connected with the Baltimore Motor Carriage Co., will act as his assistant.

Philadelphia, Pa.—The Keystone Motor Car Co. expects to be located in its new quarters in Broad street, near Race, by the first of December. The company is now located at 230-240 North Broad street.

New York—The Fleur de Lis Automobile Co. has been incorporated with a capital stock of $25,000. It will engage in the manufacture and sale of motor cars. The incorporators are F. Knowlton and E. A. Montfret.

Albany, N. Y.—The Hillside Motor Car Co., of Queens, has been incorporated with a capital stock of $40,000 and will manufacture and deal in motor cars, etc. The incorporators are J. A. Jones, M. S. Sears and F. V. Rielly.

Topeka, Kan.—A change has been made in the Mathews Auto Supply Co., of 514-16 Jackson street. Mr. Matthews has sold his interest to E. Whipple, and in the future the latter will be associated in the business with J. R. Cowdrey. The concern will be known as the Cowdrey-Whipple Auto and Supply Co.

Walla Walla, Wash.—The Inland Auto Co., of this city, has been appointed local agent for the Corbin.

Augusta, Me.—The Back Bay Garage Co., of this city, has been incorporated with a capital stock of $25,000.

Albany, N. Y.—The New York Coach and Auto Lamp Co. has been incorporated with a capital stock of $2,500.

Indianapolis, Ind.—The Coppock Motor Car Co. has filed a notice that its place of business has been changed from Marion to Decatur, Ind.

Providence, R. I.—J. K. Gafford has been appointed local agent for the Fiat. The location of the new agency has not yet been decided upon.

New York—The Park Avenue Garage Co. has been incorporated with a capital stock of $125,000, and will manufacture and deal in motor cars.

Cleveland, O.—M. B. Lighthall has bought out the Empire garage on Carnegie avenue. The establishment will be devoted entirely to electric cars.

Sherburne, N. Y.—Walter Cook and William Wright have removed their bicycle and motor car repairing business to the Chaffe shop on North Main street.

Toledo, O.—The Lichtie Automobile Co. is erecting a new garage at Eleventh and Madison avenues. It expects to be installed in its new quarters by December 15.

Springfield, Ill.—The American Automobile Supply Co. has been incorporated with a capital stock of $50,000, and will manufacture motor cars, parts, supplies and accessories. The incorporators are M. and E. D. Roosa and W. R. Reid.

Buffalo, N. Y.—The Thomas Motor Cab Co., of Buffalo, has been incorporated with a capital stock of $50,000, and will engage in the manufacture of motors, engines, etc. The incorporators are E. R. Thomas, J. J. Henry and E. McMillo, all of Buffalo.

Philadelphia, Pa.—At the instance of Charles Berg, a stockholder in the Commercial Truck Co. of America, manufacturer of electric trucks, a bill in equity has been filed in common pleas court, No. 3, restraining the officers of the company from conveying their plant in Blair county to H. S. Kerbaugh, Inc. At a meeting of the company held last week it was decided to convey the plant to the Kerbaugh Co., the Commercial company to receive $100,000 worth of stock in the former concern. Despite the protests of Mr. Berg, the resolution was passed. He maintains that the property is worth far more than the amount named, and that the officers are not empowered to authorize the conveyance, such power being invested solely in the stockholders.

Boston, Mass.—Edward Cole, formerly connected with the Franklin company, has joined the forces of the Premier company.

Albany, N. Y.—Ground has been broken for the erection of a new garage at Quail and Bradford streets. The new structure is for W. J. Sullivan.

La Crosse, Wis.—C. N. Holway, the manager of the Rambler company's branch in this city, is building a one-story addition to his garage at Fifth and State streets.

Philadelphia, Pa.—The Philadelphia Auto Accessories Co. has been appointed the agent in this country for the Aston Motor Accessories Co., of Birmingham, England.

Boston, Mass.—W. M. Jenkins is about to remove from his present quarters at 504 Columbus avenue to 236 Columbus avenue. He has the local agency for the Mitchell cars.

Madison, Wis.—The Meiselbach Motor Wagon Sales Co., of Milwaukee, has been incorporated with a capital stock of $10,000. The incorporators are John Wild, T. D. Clinton and O. Schlogal.

Newark, N. J.—A. T. Purcell has been appointed manager of the Hygrade Motor Car Co., in Hill street, in place of F. H. Howes, who is now connected with the Maryland car interests in this state.

Augusta, Me.—The Back Bay Garage Co. has been incorporated with a capital stock of $25,000. It will deal in motor vehicles. L. A. Ingalls is the president of the company and A. M. Currier is treasurer.

Newark, N. J.—The National Auto Transit Co. has been incorporated with a capital stock of $25,000. It will operate a motor livery. The incorporators are W. S. Muchmore, W. W. Lochenberg and L. H. Abbey.

New York—Robert Goelet is about to erect the largest garage in the world. It will be located on Broadway, between Sixty-fourth and Sixty-fifth streets, and will be six stories in height. In addition to the ordinary garage features there will be a rathskeller and restaurant.

Rochester, N. Y.—A new concern has been organized, to be known as the University Automobile Co., and has taken over the garage formerly occupied by E. Vernon Hart, at 30 Carleton street. Victor L. Kraft, E. G. Waite and E. Vernon Hart are the members of the concern. They have been appointed agents for the Mitchell, Jackson and Colt cars. Hollis

& Rand, the agents for the Mora and Overland machines, are now located in their new garage on Fordham street.

Boston, Mass.—The Morrison and Price Co. has leased the old quarters of A. E. Morrison at 93 Massachusetts avenue.

Philadelphia, Pa.—The Krouse Auto Exchange is to remove from 136 North Broad street to 215-217 North Broad street.

Philadelphia, Pa.—The Hills Motor Car Co., which has the local agency for the Royal Tourist, has added the Corbin car to its list.

Philadelphia, Pa.—Watson & Huckel have just finished plans for the erection of a garage at 229-243 North Broad street for Henry Carey Lea.

Corning, N. Y.—The Corning Motor and Engine Co. has been incorporated with a capital stock of $50,000, and will engage in the manufacture of motors, engines, etc.

New York—Schedules in bankruptcy of Louis C. Howard, who conducted a storage establishment at 216 West Thirtieth street, show assets of $286 and liabilities of $3,662.

Roseville, Cal.—A motor bus line will shortly be started between this town and Rocklin. A number of the residents of the latter place are interested in the project.

Indianapolis, Ind.—A permit has been granted to the Indianapolis Motor Car Co. for the erection of a two-story brick garage at 419-423 East Market street, at a cost of $8,500.

Marshall, Mich.—Negotiations are in progress between the Swallow Steel Auto Co., of Jackson, and the Business Men's Association, of this city, relative to locating a factory here.

Boston, Mass.—Schedules in bankruptcy of the Back Bay Automobile Co., which were filed during the last week, show liabilities of $89,344.21, of which $12,000 are secured, and assets of $11,625.96.

New York City—The Rees Co., proprietor of a storage establishment at 42 West Sixty-second street, has filed a schedule in bankruptcy, with assets of $18,979, and liabilities of $14,061.

Paterson, N. J.—The Howe Motor Car Co. has moved into its new quarters at 52 Bank street, Newark, and in addition to acting as state agent for the Reo car will do a general garage business.

New York.—In the future Robert N. Clyde will act as assistant manager of the local branch of the Babcock Electric Carriage Co., at Broadway and Forty-eighth street. H. E. Wagner is the manager.

Long Island City, N. Y.—Legal complications are likely to result from the seizing of some property belonging to the Daimler Mfg. Co. The property in question was seized by the sheriff and was to be sold to satisfy a verdict against the company in a damage suit. Mrs. Olga Flinsch, the wife of one of the largest stockholders of the company, has brought suit to prevent the sale.

Boston, Mass.—H. C. Stratton & Co., formerly located on Huntington avenue, has removed to 741 Boylston street.

Chicago—The Taximeter Motor Cab Co., of 153 La Salle street, has been incorporated with a capital stock of $50,000, and will operate motor cabs.

St. Louis, Mo.—Tom W. Benoist, former head salesman for the Macnish Automobile Co., has joined the forces of the Vesta Battery Co., of 4139 Olive street.

Hartford, Conn.—The Palace Auto Station has secured the agency for the Morgan & Wright tires for this city and Toland, Middlesex and Windham counties.

Philadelphia, Pa.—The Firestone Rubber Co. is altering and enlarging the building at 256 North Broad street, formerly occupied by the Pennsylvania Electric Vehicle Co. in this city.

Pontiac, Mich.—The Monroe Body Co. has resumed work with two-thirds of its regular force, and by the middle of the month expects to be running full force again.

Allentown, Pa.—A charter has been granted to the Lehigh Valley Motor Car Co. with a capital stock of $10,000. The company will run motor bus lines between points not reached by the trolley cars.

Detroit, Mich.—The Sietz Automobile and Transmission Co., of Monroe, which was recently incorporated, has taken over the building at 225-29 Beecher avenue, and will in the future be located in this city. The company manufactures all kinds of motor supplies, but is chiefly interested in the transmission gear invented by W. J. Sietz.

New York—Harry Curtis Auto Co.; capital stock, $10,000.; to manufacture motor cars, etc. Incorporators, Amanda Curtis, H. S. Rogers, J. D. Brown.

Bayonne, N. J.—The Heyl-Dia Rubber Riveted Tire Co.; capital stock, $1,000,000; to engage in the manufacture of rubber and other tires for motor cars. Incorporators, G. E. Heyl-Dia, E. L. Borroughs and O. B. Bergstrom.

Bayonne, N. J.—Automobile Exchange; capital stock, $100,000; to deal in motor cars and motor supplies. Incorporators, E. D. Cronin, F. Knowlton.

New York—Manhattan Taximeter Co.; capital stock, $5,000. Incorporators, C. P. Stewart and A. A. Stewart.

Boston, Mass.—Frederick E. Randall Co.; capital stock, $25,000; to deal in motor cars. Incorporators, M. A. Dykeman and N. C. Randall.

Chicago—Motor Machine and Mfg. Co.; capital stock, $2,500; to manufacture motor cars and accessories. Incorporators, S. Williams, J. G. Finkbeiner.

New York—Ellsworth & Fay; capital stock, $10,000; to engage in the manufacture of motors, engines, etc. Incorporators, J. M. Ellsworth, C. W. Floyd and H. B. Leary.

Springfield, Ill.—De Souchet Motor Appliance Co.; capital stock, $100,000; to engage in the manufacture of motor cars and motor vehicles. Incorporators, Z. L. De Souchet, F. Hobbs and E. A. Hanks.

Detroit, Mich.—The Grey Motor Co. has increased its capital stock from $30,000 to $70,000.

Cleveland, O.—The Cuyhoga Motor Car Co. is about to erect a new garage at 10547 Euclid avenue.

Woodstown, Pa.—A motor bus line is shortly to be started between this town and other towns in Salem county.

Philadelphia, Pa.—A petition in bankruptcy has been filed against the Auto Maintenance Co., of 1141 South Broad street.

Boston, Mass.—The Algonquin Motor Car Co. has taken over the agency for the Oldsmobile. Arthur E. Adams is the manager of the concern.

Camden, N. J.—The Philadelphia Taxicab Co. has been incorporated with a capital stock of $200,000, and will trade and deal in motor cars. The incorporators are L. T. Layton, J. T. Hickman and G. H. B. Martin.

Cleveland, O.—The Studebaker Automobile Co. has opened a local branch on Euclid avenue. The new agency will be under the management of Alvin H. Smith, formerly connected with the Central Automobile Co.

Philadelphia, Pa.—At the recent meeting of the Auto Transit Co. J. O. G. Duffy, the vice president and a director of the concern, tendered his resignation, and J. M. Hill, the manager of the Commercial Truck Co., was elected to the vacancy.

Cleveland, O.—J. Wentworth Smith and W. H. Havens have retired from partnership in the Wentworth Motor Car Co. and in the future the concern will be controlled by Frank Adams, who has been associated with the others in the management of the company.

Pittsburg, Pa.—The Nixon Auto Co., which was recently organized to handle the Dolson car, is temporarily located with the Allegheny Auto Co. in the rear of 915 Irwin avenue, Allegheny. The company intends to locate in its own quarters as soon as a satisfactory location can be obtained.

Pittsfield, Mass.—Fred T. Francis, of the Berkshire savings bank, has been appointed temporary receiver of the Berkshire Motor Car Co., of this city. The action was taken at the instance of the company in order to protect its creditors. The liabilities are given as $58,000 and the assets as $30,000.

Boston, Mass.—The Whitten-Gilmour Co., the recently appointed agent for the Thomas car, has been doing business in room 16, 5 Park square, but, owing to the rapidly increasing business, has decided to secure quarters on the ground floor. It will remain there until its garage on Boylston street is ready for occupancy.

LEGAL LIGHTS AND SIDE LIGHTS

WHEEL TAX PROPOSED

Chicago motorists are interested in a proposed wheel tax which will be levied for the purpose of keeping the city streets in repair and improving other highways, a scheme devised by Mayor Busse and which was brought up before the council Monday night for a first reading, after which it was referred to the license committee, which will listen to protests from interested parties and whip the measure into shape. The fees proposed by the ordinance are as follows: One-horse wagon, $4; two-horse wagon, $10; three-horse wagon, $15; four-horse wagon, $25; six or more horse wagon, $36; motor car runabout for two persons, $12; touring car, $20; motor truck, coach or bus, $30. This tentative schedule has aroused the local motorists, who are objecting to the discrimination shown. Few are opposed to paying a wheel tax, believing it is right that the users of the roads should help keep them in repair; but fault is found with the fees in that, for instance, a one-horse wagon, which is using the city streets almost continuously and which damages the highways more than does the motor car with its rubber tires, pays only $4 and a motor car runabout three times that. The city authorities say, however, that there probably will be a revision of the schedule and a more equitable rating made. The Chicago Motor Club has taken active steps in the matter by appointing a committee, consisting of F. C. Donald, J. F. Gunther, Harold Vorce, J. V. Lawrence and Walter L. Githens to appear before the license committee and secure better terms for the motorists.

BALTIMORE AFTER SCORCHERS

Members of the Automobile Club of Maryland and the public in general have been stirred up to such a degree of indignation over the recent killing of a man by one of two motor cars, the occupants of which were racing along the principal thoroughfares of the city during the early hours of Thanksgiving morning, that vigorous methods to suppress reckless riding have been decided on by the club and the citizens of the city. The result is that the driver of the machine that killed the man, Frank Brown, Jr., son of ex-Governor Frank Brown, the present Democratic boss of Baltimore city and a member of the automobile club, has been cited to appear before the board of governors, on charges which are likely to lead to his suspension or expulsion as a member and has, also, been fined $25 and costs on the charge of exceeding the speed limit. The public indignation has also caused the police to wake up, in consequence of which many motorists well known residents of the city have been arrested and fined from $5 to $25 and costs of similar charges as that against young Brown. Immediately following the fining of Brown the club made formal charges against him of conduct injurious to the welfare and character of the club and of wilful and reckless disregard of the provisions of the Maryland state motor vehicle law, which will be heard December 17. Certain motorists have been in the habit of racing late at night and during the wee morning hours in certain sections of the city, making it extremely dangerous for those pedestrians who are compelled to be out late at night. The police made feeble efforts to apprehend these scorchers until the fatal accident of Thanksgiving morning occurred, when the people of the city threatened to place broken glass and other obstacles in the path of the motorists, while some of the more radical persons went so far as to threaten to shoot at the tires of machines that came anywhere near running them down. The action of the club members, however, and the display of activity on the part of the police have quieted these radicals to some extent.

RHODE ISLAND MAKES PLANS

Rhode Island is going to enact some motor laws at its next session of the legislature that will be aimed at people who come into the state and drive recklessly there. Several fatalities have occurred recently in that state and the drivers have sped off and escaped. They were believed to have come either from Massachusetts of Connecticut. The state is so small it is possible to get over the border quickly in case of trouble. At present there is no law in Rhode Island in regard to controlling cars from other states. They may be brought there and remain as long as the owner wishes without being registered. A law somewhat after the Massachusetts one where after 7 days a car must be registered will be presented for passage. The Rhode Island Automobile Club is to urge the passage of legislation whereby a driver of a car must pass an examination before he is given a license to operate a machine. Some of the members of the legislature feel that the owners of big cars from New York, particularly those that are running back and forth from Newport to Narragansett pier all summer, tearing up the road, should be asked to help pay for the damage by paying a small registration fee which would be sufficient to do the work.

FIGHTS FOR ROAD RIGHTS

The motorists of Wilkes-Barre, Pa., are determined that the action of the Laurel Run Turnpike Co. in barring motor vehicles from that highway must be upheld by the highest legal authority in the state before they shall be content to sit supinely by and see what they consider their dearly bought rights trampled under foot. The mere fact that they are forbidden the premises makes them yearn to cavort over the Laurel Run road. Millionaire W. W. Scranton is especially hot, he having had a tollgate dropped in front of him and ordered to turn about and go the way he came. The argument that ensued waxed warmer and warmer until the gatekeeper demonstrated his authority by securing an ax and chopping sundry holes in the hood, body and tires of Mr. Scranton's car, whereupon the millionaire concluded to face about. The court has already been given an opportunity to decide as to the legality of the turnpike company's closure of the road to motorists and probably will hand down its opinion next week. The complainant avers that as the highway is a public one, and his car and himself are chartered by the state, and pay for the privilege, he cannot be legally excluded. The turnpike company's contention is that the speed of motor cars makes them a menace to other vehicles using the road; that the state laws do not provide what toll shall be paid for motor cars, and that it would be impossible to fix an adequate rate owing to the destructive manner in which motor cars take a little bit off the top as they skip along the road. Both sides say they are determined to carry the case to the highest court before they submit to the decision.

WANTS HORNS TUNED

One of Wilkes-Barre's legislators who possesses an o'erdelicate ear objects to what he terms the inharmonious discords emitted by the motor horns in that city. To remedy the evil he has introduced into the city council an ordinance to compel motorists using the city streets to have their horns attuned to some one note in the musical scale which shall prove most pleasant—or least objectionable—to those citizens possessing a cultivated ear. A fierce battle in the council chamber is predicted when the measure comes up for final passage—not as to the necessity for such a law—but as to what particular note shall be selected. One can already, in his mind's eye, see the B flats lining up against the F sharps, with possibly a small contingent of busy Bs holding the balance of power and working to get the other factions to compromise on their favorite note.

VOL. 1 CHICAGO, DECEMBER 12, 1907 No. 1

Published Every Thursday by

The Excelsior Supply Company

Manufacturers-Importers-Jobbers

Main Office

233-235-237 Randolph Street, Chicago

The Aim and Intent of THE LIVE WIRE is to better acquaint Excelsior customers *everywhere* with the people they buy their goods from—meaning US.

Everybody is invited to express opinions and offer suggestions tending to increase the attractiveness and interest of this page.

Address all communications to

THE EXCELSIOR SUPPLY CO.,

Jobbers of

Everything for Automobile Dealers and Owners,

233-235-237 Randolph St., Chicago.

EDITOR.....THE ADVERTISING MANAGER

SALUTATION

Herewith we present to our friends, customers and the dealers throughout the country, Vol. 1, No. 1, of the "EXCELSIOR LIVE WIRE,"—a sort of publication within a publication, as it were, the purpose and intent of which is to keep in closer touch with our old customers everywhere—and incidentally to win over as many new ones as we may be able.

"THE LIVE WIRE" will hereafter appear regularly in Motor Age every week and its aim will be to interest its readers as a personal weekly heart-to-heart talk might interest—at the same time enlighten Excelsior customers as to what is doing in general within the Excelsior household.

Get into the habit of reading "THE LIVE WIRE" and charge us up with the damages.

OUR ADVERTISING SCOOP

In the record-breaking Chicago Show Issue of Motor Age last week, the Excelsior Supply Co.'s two-color advertisement, occupying sixty-eight pages of space was the one big advertising noise of the year.

In both the prior New York show issues, the Excelsior advertisement covered fifty-six big pages, in two colors, each of which was a record in itself, which attracted the widespread attention of the trade at large, but it remained for the Chicago show effort to put the mark so high as to stand a monument to Excelsior progressiveness and originality not to be approached for many a day—if ever.

We want to take advantage of this opportunity to voice our thanks to those of our friends who so generously co-operated with us in our record-breaking effort and to reassure each again of our keenest appreciation of the confidence thus expressed in the Excelsior Supply Co. and its ability to "do things."

A RECORD SALES YEAR

During the year 1907 now drawing to a close, Excelsior sales have averaged three and one-half orders with every tick of the clock each working day. In 1906 they were less than three sales to the clock-tick. Next year they will be FIVE OR MORE.

ESTABLISHED 1876

Thirty-one years ago the Excelsior Supply Co. first flung its shingle to the winds for better or for worse. It has always been "for better"—better now than ever—and its going to be better hence than thence.

Thirty-one years of honest dealing, right prices and courteous attention to the needs of our customers means more *in sentiment* than can be explained *in words*.

It means that on our books today are men and firms who have been there as appreciative buyers for years and years—not one but what knows to the last notch of certainty that doing business with the Excelsior Supply Co. means getting a "square deal" in each and every detail.

If EVERY dealer in the United States would buy his goods of us we would be satisfied, but so long as ONE remains who has not yet tried the Excelsior way of dealing, just so long will we be after that ONE to get aboard the band wagon and become a member of the happiest Happy Family in all the world.

"Get in."

WE SELL IT

Everything you can possibly think of for the man who motors. It makes no difference what it may be—order of us and get it *quick*.

OUR MEN ON THE ROAD

Never before in the history of the Excelsior Supply Co. have we enjoyed such entire satisfactory representation on the road. Our roster of "travelers" at the present time numbers a small regiment—each man a "Live Wire" in himself—more—a dynamo.

During the Chicago show, twenty-six of these "live wires" were present at the Excelsior banquet, given at the Sherman house, Chicago, during the progress of which the general policy of the company was discussed, plans formulated for the coming year, and a real old-fashioned "get together" kind of a time in general enjoyed—surely that. Reports made by the representatives present, who came from Coast to Coast, showed that for November alone, this year's orders are 57 per cent greater than during the corresponding month one year ago. Those Excelsior travelers who were not in Chicago on this occasion will make a memorandum of the fact that each has one big feed due him "on the house" when he gets back to headquarters.

REAL SATISFACTION

It ought to be a lot of satisfaction to KNOW where you can get what you want when you want it. That is one of the Excelsior mottos and we are going to live up to it, no matter what happens.

You can't possibly hand us any order too big for our capacity and, on the other hand, no order can come too small to receive our most careful attention.

ALWAYS SOMETHING NEW

It will be our aim to show each week in the columns of "THE LIVE WIRE" one or more new things combining merit with the right price. If the crop of new articles runs out we will revert to *good* old things, but always in "THE LIVE WIRE" you may be certain you will find described or shown something worth ordering. Our word for that.

Read it every week.

THIS WEEK FOR INSTANCE—

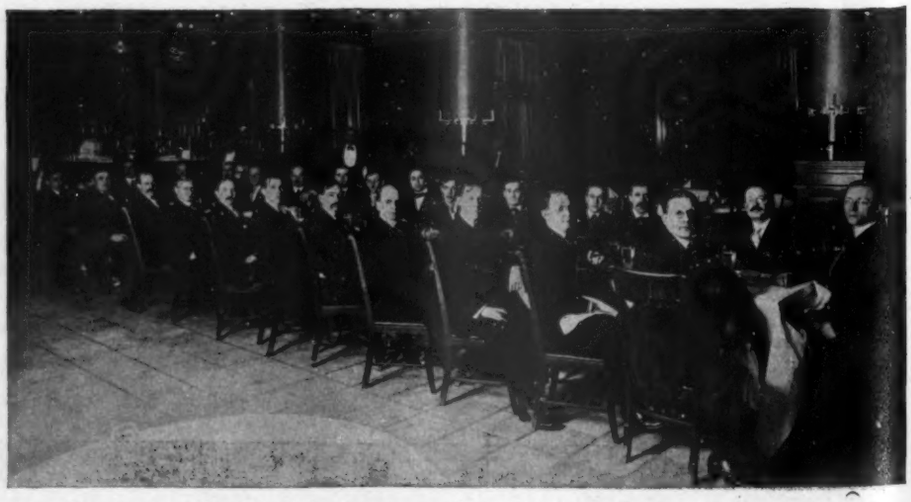
The Triumph Valve Remover

A new device that removes valves quickly and easily. Simple, ingenious, instantaneous in action, saves labor, saves time, and saves trouble. Does away with the annoyance, temper loss, and exasperation that have invariably accompanied the use of other valve removers. Enables you

to remove your valve key or spring easily, with no broken finger nails, and no side strain or bending of valve stem. Action instantaneous. Fits any gasoline engine.

Price, $1.00.

Send in Your Orders.



BANQUET OF EXCELSIOR SUPPLY CO. AT SHERMAN HOUSE DURING SHOW WEEK.